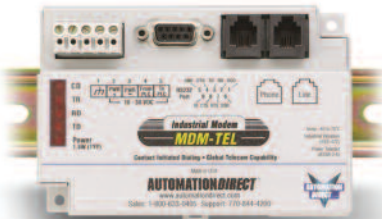


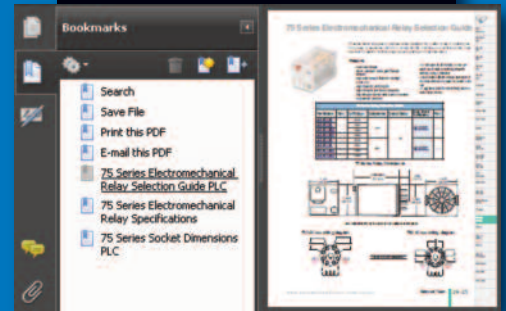
Communication

Section 28

Stride®



**In this interactive PDF
you can:**



- Use bookmarks to navigate by product category
- Use bookmarks to save, search, print or e-mail the catalog section
- Click on part #s to link directly to our online store for current pricing, specs, stocking information and more



Practical Control and Information Communications

Use AUTOMATIONDIRECT's communication products to provide a link via phone, Ethernet or serial connection to your industrial controllers. Serial products include cable kits, RS-232/422 network adapters and converters.

Coordinated control

Communication links between controllers can be used to create robust, modular control systems. Sharing data between separate operations enables each local controller to better contribute to the system's overall performance. Whether separated by feet or by miles, your controllers can access what's going on in the world around them.

Data sharing

Run a more effective business by making use of the valuable information within your process controllers. The business needs to know what manufacturing is doing whether you call it ERP, MES, SCM, or Ojust plain common sense.

Remote support

Remotely access machine or process controllers for troubleshooting, configuring, updating or monitoring the system. Whether it's your production facility or your controller in a customer's facility, having convenient and secure remote access ensures maximum production with minimal support costs.

Cat5e STP Ethernet Patch Cables: 3 ft. to 50 ft. lengths



Commercial Grade vs. Industrial Grade

Before you take a risk with commercial grade products to save a few bucks, ask yourself how much just one field failure will cost you in service time, reputation, and money. Communication products not designed to operate in the heat, cold, or humidity of an industrial site or products not ruggedized for power spikes and vibration don't have to quit working to cause headaches. Communication products, along with cables and connectors, are notorious for causing those irritating intermittent control system

bugs that inevitably absorb loads of troubleshooting man hours over a few dollars in parts. Neither your customer nor your family wants you onsite resolving a late night or weekend communication link issue. Sometimes commercial grade will do, but for those times when you and your customer need rock-solid reliability, AUTOMATIONDIRECT has the best values in industrial communication products.



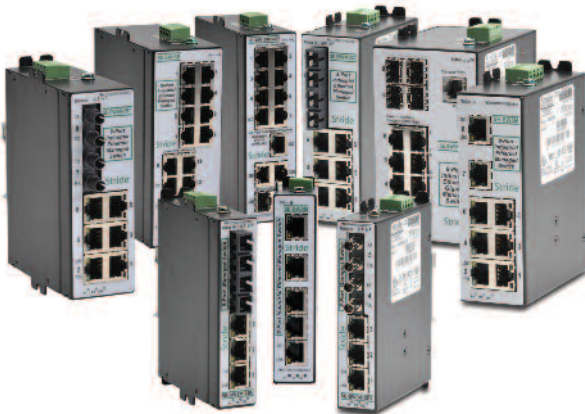
Ethernet Switches and Media Converter

Performance and Quality

Stride®

Managed Models

Starting at \$445



**Gigabit Ethernet
(on select models)**

Unmanaged Models

Starting at \$99



Metal Models (-WT)

Starting at \$199

Industrial Strength Ethernet

Stride is our line of managed and unmanaged industrial grade Ethernet switches and media converters. Designed with our PLC, HMI and drive customers in mind, Stride Ethernet switches are specifically built for industrial environments. With a Stride industrial Ethernet switch on an isolated control LAN, you can reduce data collisions that slow down your network. Stride Ethernet switches automatically determine and remember the devices connected to each port and route messages only through the appropriate ports. Install Stride switches and your Ethernet control network will maintain more consistent cycle times even under heavy I/O and data exchange.

Extreme Temperatures

For industrial applications where temperatures can change from freezing to sweltering heat, the Stride line offers Ethernet switches that are designed for standard industrial environments, as well as the most extreme industrial environments. The rugged metal housing switch models offer superior EMC performance and corrosion-resistance while also allowing you to choose various mounting methods for your application. This is standard and no kits are required!

Fiber Optic Support

Stride offers models with a variety of Fiber Optic connections. Fiber optic cables are immune to electrical and magnetic interference and cannot be damaged by induced voltage transients. Fiber optic cabling not only enhances reliability, it saves time you might have spent tracking down those nasty communications problems caused by electrical interference. Also, your network distance is greatly increased when using Fiber optic cabling.

Features

Advanced Hardware

- All 10/100/1000 RJ45 ports are auto-detecting, auto-crossover and auto-polarity.
- Redundant power inputs with industrial surge and spike protection
- Fiber optic ports available on certain models
- SFP transceiver modules on selected models offer additional fiber options

Real-time Performance

- Store and Forward wire speed switching - no delays
- Full-duplex operation with flow control (no collisions!)
- Auto crossover (MDI/MDIX) and auto polarity

True Industrial Design

- Ethernet Isolation -1500 VRMS 1 minute
- Spike protection - 5,000 watts (10x for 10 uS)
- UL, (cUL) listed and CE certified
- Hazardous locations rated for Class 1, Div. 2
- Rugged heavy-gauge Aluminum case available

Stride® Industrial Ethernet Switches & Media Converter

Introducing Stride Managed Switches

As the use of industrial Ethernet devices increases, network security, segment isolation, and packet priority control become increasingly difficult when using unmanaged switches. This is where the Stride managed switch becomes especially beneficial in an industrial network application. Supported features such as SNMP, IGMP, VLAN, QOS and network redundancy, allow networks to be configured and managed in a way that assures the highest performance levels for your application.

The Stride Managed Ethernet switches allow you to design and build reliable, rugged and cost effective networks with a switch

that will survive extreme temperatures, as well as dirty, unreliable industrial power. Meeting UL 1604 (Class I Div. 2), and the IEC68-2 standard for vibration resilience, the Stride switches will provide years of reliable performance in applications too tough for commercial grade switches.

Our managed switches offer Gigabit and fast Ethernet options, as well as various fiber SFP transceiver modules that can be used on select models. Just take a look at some of the key features that separate Stride the from the rest of the pack:

Managed Switches

Mounting Options: Supports DIN-rail and side mounting.

Activity, Link and Speed LEDs are integrated into the RJ45 ports.

Fiber Optic Port on selected models with ST or SC type connector that supports half and full duplex. SFP module options for distances up to 30Km.

Fiber LED to indicate a proper connection for the fiber connectors and network activity. (on models with SFP or Fiber ports).

RJ45 Ports that are fully IEEE 802.3 compliant with 10/100 auto-detecting for speed and duplex (10/100/1000 on selected Gigabit switch models).

Auto crossover (MDI/MDIX) automatically supports either straight or crossed cables which greatly reduces cable installation errors.

Redundant Dual Power Inputs with industrial surge and spike protection help reduce down time when there is primary power loss. Reverse power protection is also supported.

Power LED to indicate power on P1 or P2 power inputs.

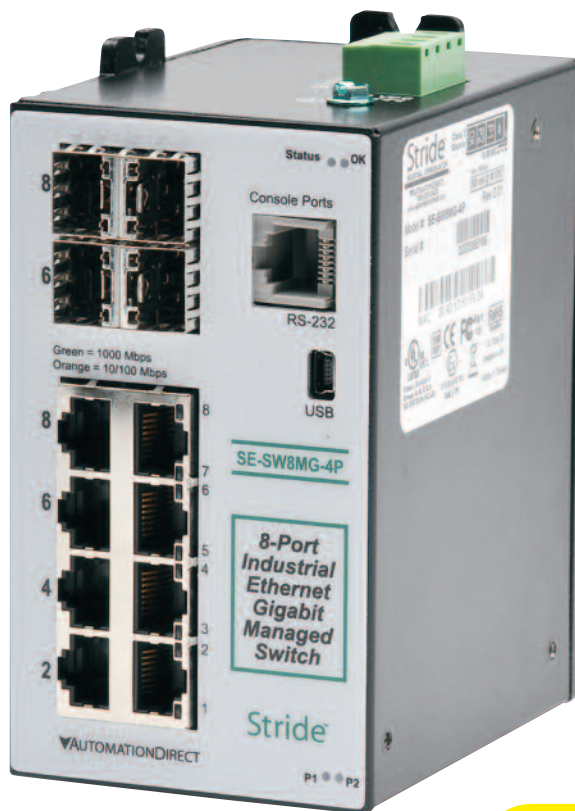
Flexible Console Connections
2 Console Ports (USB & RS-232) for convenience.

All Metal Case provides sturdy protection and is designed to remove excess heat from components; offers superior EMC performance.

Industrial Temperature Range
-40 to +75 °C (-40 to +165 °F) operating temperature range. 5 to 95% RH humidity range (non-condensing).

Agency Approvals:

UL1604, CSA C22.2/213 (Class I, Div.2)
EN50021/EN60079-15



SFP Option Modules: STRIDE SFP (small form-factor pluggable) transceivers, also called mini- GBIC, are compact, hot-swappable transceivers with LC fiber connectors. The Stride SE-SW8MG-4P and SE-SW10MG-2P switches have ports that accept these optional transceivers to add fiber connectivity at Fast Ethernet or Gigabit Ethernet speed. There are several models to choose, ranging from 550 meters to 30Km.

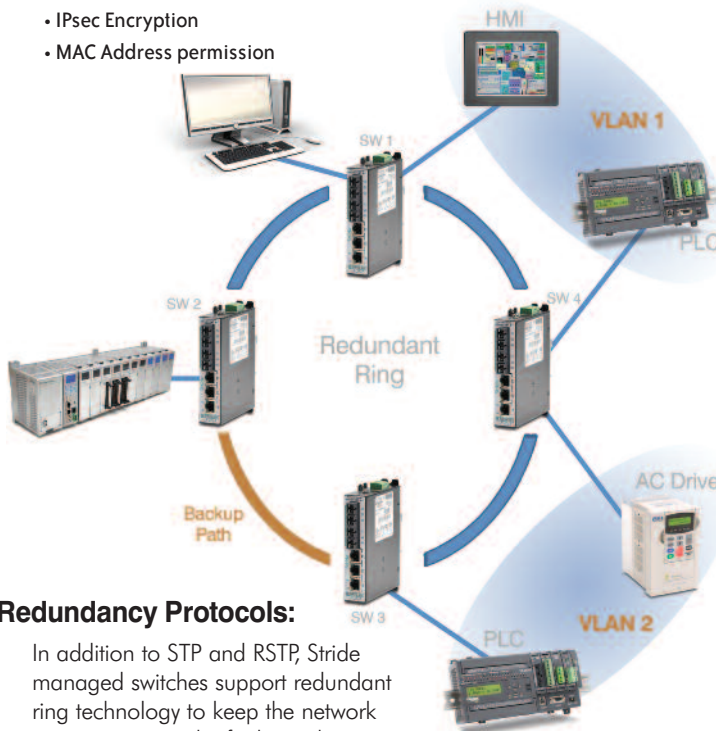
Model SE-SW8MG-4P shown above. For detailed specifications on all models, see following pages

Advantages of Stride Managed Switches

Network Security:

The Stride managed switches have several security features that help to support a secure network strategy.

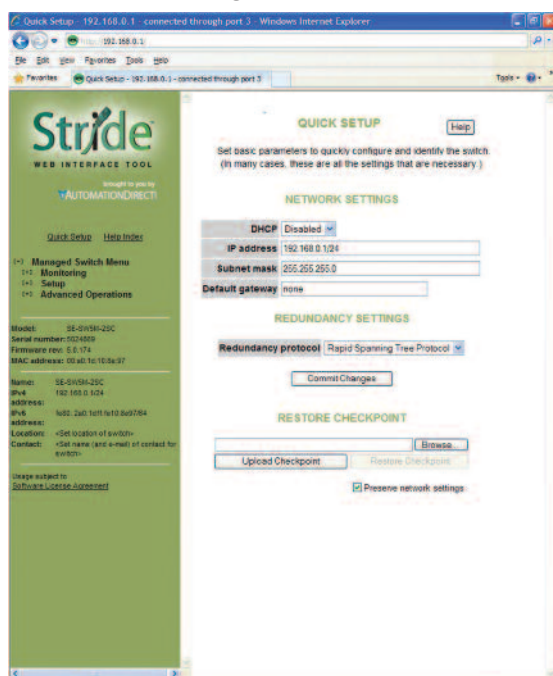
- Port Control (Disable unused)
- Remote Access Security
- IPsec Encryption
- MAC Address permission



Redundancy Protocols:

In addition to STP and RSTP, Stride managed switches support redundant ring technology to keep the network running even under fault conditions. This allows you to create a ring that allows for multiple, redundant paths on the network. The switch will then intelligently decide the best path to take.

Web Based Configuration:



Enhanced traffic filtering:

Multicast Filtering (IGMP): It is common, in a control system, to see a large amount of Multicast packets. These packets cannot be filtered out by an unmanaged switch. The Stride managed switch can intelligently 'learn' whether certain Multicast packets should be sent to the devices on its ports and will filter them or not filter them appropriately.

• Traffic Priority (QoS/CoS):

Using the Quality of Service feature, the Stride switch can apply tags to a packet coming into the switch to give that packet a higher priority going to another switch.

• VLAN Support:

A VLAN is a logical way to separate networks in ways that used to require physical separation. VLAN groups can be configured through software instead of physically relocating devices or connections. This reduces wiring costs and allows for devices to be grouped together even if they are not located on the same network switch.

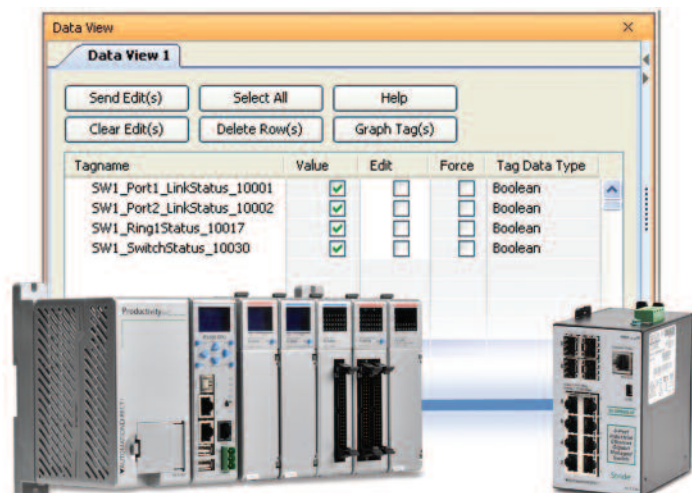
Troubleshooting Tools:

Port Mirroring: With the Port Mirroring feature you simply specify which ports' data you want to view and where to send that data. Plug your PC into that port and use Ethernet sniffing software (such as Wireshark) and you can monitor the data being sent back and forth.

Network Statistics: By looking at the type of packets coming in and out of the switch, you can determine what action needs to be taken to make your network perform better.









Modbus Status Registers:

If you have a controlling device on the network that has Modbus TCP or UDP client capability, there are several diagnostic tags that can be read from the switch to indicate the health of the network.



Stride Managed Switches Selection Guide

At a glance...

Part Number	Description	Price	Part Number	Description	Price
SE-SW5M	 STRIDE™ SlimLine industrial managed 5-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->	SE-SW8MG-4P	 STRIDE™ SlimLine industrial managed 8-port Ethernet switch with all Gigabit ports, metal housing, operating temperature range of -40 to +75 deg. C, eight 10/100/1000BaseT RJ45 Ethernet ports and four advanced combination SFP ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked. Optional SFP modules sold separately.	<--->
SE-SW5M-2ST	SE-SW5M-2ST utilizes ST fiber ports		SE-SW10MG-2P	 STRIDE™ SlimLine industrial managed 10-port Ethernet switch with Gigabit ports, metal housing, operating temperature range of -40 to +75 deg. C, seven 10/100BaseT RJ45 Ethernet ports, one Gigabit RJ45 port and two Gigabit advanced combination SFP ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked. Optional SFP modules sold separately	<--->
SE-SW5M-2SC	SE-SW5M-2SC utilizes SC fiber ports				
	STRIDE™ SlimLine industrial managed 5-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, three 10/100BaseT RJ45 Ethernet ports and two multi-mode 100BaseFX fiber ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->			
SE-SW8M	 STRIDE™ SlimLine industrial managed 8-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->			
SE-SW8M-2ST	SE-SW8M-2ST utilizes ST fiber ports				
SE-SW8M-2SC	SE-SW8M-2SC utilizes SC fiber ports				
	STRIDE™ SlimLine industrial managed 8-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, six 10/100BaseT RJ45 Ethernet ports and two multi-mode 100BaseFX SC fiber ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->			
SE-SW16M	 STRIDE™ SlimLine industrial managed 16-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, sixteen 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->			

Part Number	Description	Price
SFP-4K-FMF	STRIDE™ SFP (Small Form Factor) 100Mbps transceiver (Transmit/Receive) module, supports data transmission up to 4km on a multimode fiber. LC duplex receptacle	<--->
SFP-30K-FSF	STRIDE™ SFP (Small Form Factor) 100Mbps transceiver (Transmit/Receive) module, supports data transmission up to 30km on a single mode fiber. LC duplex receptacle	<--->
SFP-500-GMF	STRIDE™ SFP (Small Form Factor) Gigabit (1.25GB) transceiver (Transmit/Receive) module, supports data transmission up to 550m on a multimode fiber. LC duplex receptacle	<--->
SFP-2K-GMF	STRIDE™ SFP (Small Form Factor) Gigabit (1.25GB) transceiver (Transmit/Receive) module, supports data transmission up to 2km on a multimode fiber. LC duplex receptacle	<--->
SFP-10K-GSF	STRIDE™ SFP (Small Form Factor) Gigabit (1.25GB) transceiver (Transmit/Receive) module, supports data transmission up to 10km on a single mode fiber. LC duplex receptacle	<--->
SFP-30K-GSF	STRIDE™ SFP (Small Form Factor) Gigabit (1.25GB) transceiver (Transmit/Receive) module, supports data transmission up to 30km on a single mode fiber. LC duplex receptacle	<--->


Electrical Safety


European Directives





RoHS



US Emissions WEEE Compliant RoHS Compliant

All part numbers are rated Class I, Div 2.

Stride Industrial Ethernet Fiber Transceivers

Company
InformationSystems
OverviewProgrammable
Controllers

Field I/O

Software

C-more &
other HMI

Drives

Soft
StartersMotors &
GearboxSteppers/
ServosMotor
ControlsProximity
SensorsPhoto
SensorsLimit
Switches

Encoders

Current
SensorsPressure
SensorsTemperature
SensorsPushbuttons/
Lights

Process

Relays/
Timers

Comm.

Terminal
Blocks &
Wiring

Power

Circuit
Protection

Enclosures

Tools

Pneumatics

Safety

Appendix

Product
IndexPart #
Index

STRIDE SFP (small form-factor pluggable) transceivers, also called mini-GBIC, are compact, hot-swappable transceivers with LC fiber connectors. The Stride SE-SW8MG-4P and SE-SW10MG-2P switches have ports that accept these optional transceivers to add fiber connectivity at Fast Ethernet or Gigabit Ethernet speed.



NOTE: PORT SPEED SETTINGS FOR THE STRIDE SWITCH MUST BE MANUALLY SET TO 100 MBPS WHEN USING A FAST ETHERNET SFP.



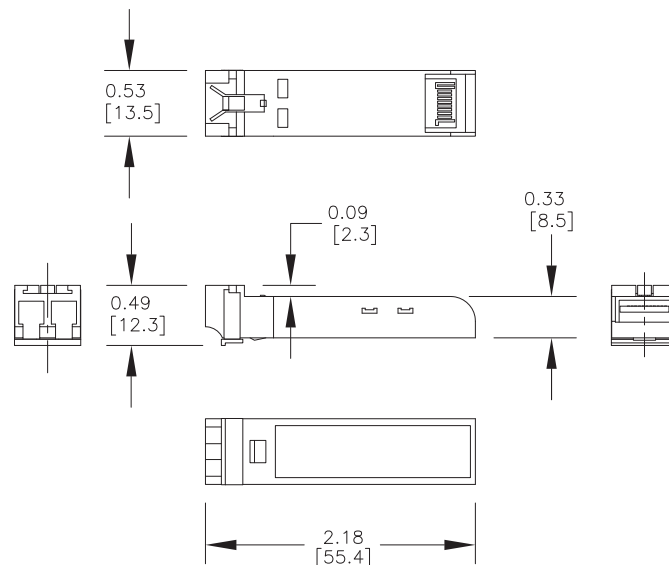
Features

- SFP Multi-Source Agreement compliant
- Serial ID functionality support
- -40° to +85°C operating temperature range
- 5 – 95% humidity (non-condensing)
- Class 1 laser safety standard IEC 60825 compliant
- Hot swappable
- 2-year warranty

Part Number	Mode	Data Rate	Light Source	Max Trans. Distance	Price
SFP-4K-FMF	Multi-mode	Fast Ethernet (155MB)	1310 nm, FP	4km	<--->
SFP-30K-FSF	Single-mode	Fast Ethernet (155MB)	1310 nm, FP	30 km	<--->
SFP-500-GMF	Multi-mode	Gigabit (1.25 GB)	850 nm, VCSEL	550m	<--->
SFP-2K-GMF	Multi-mode	Gigabit (1.25 GB)	1310 nm, FP	2km	<--->
SFP-10K-GSF	Single-mode	Gigabit (1.25 GB)	1310 nm, FP	10 km	<--->
SFP-30K-GSF	Single-mode	Gigabit (1.25 GB)	1310 nm, DFB	30 km	<--->

Dimensions

Inches [mm]



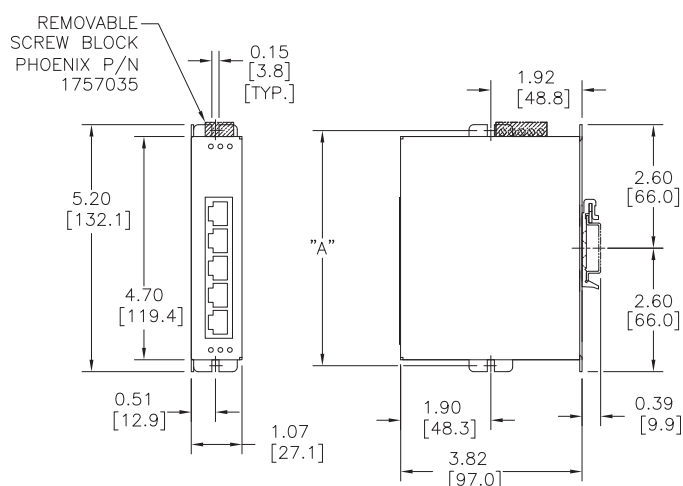
Stride[®] Managed Industrial Ethernet Switches

5-Port Managed Ethernet Switch

STRIDE SlimLine industrial managed 5-port Ethernet switch, metal housing, -40 to +75 degree C operating temperature range, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, 35 mm DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SCREW MOUNTING LOCATIONS		
SCREW SIZE	DIM "A"	
#6	5.05	128.3
#8	5.10	129.5
#10	5.15	130.8
#12	5.20	132.1



SE-SW5M



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Specifications

The following are specifications relevant to the SE-SW5M 5-port Ethernet switch.

Input power (typical with all ports active at 100 Mbps)	3.6 W
Weight	8 oz (0.23 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride[®] Managed Industrial Ethernet Switches

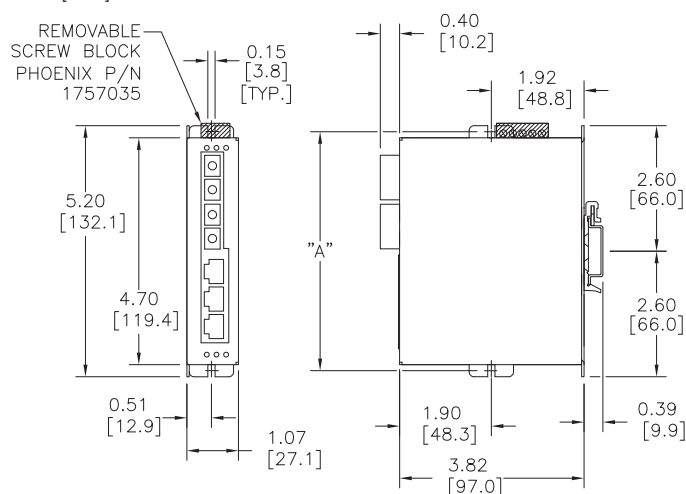
5-Port Managed Ethernet Switches with Two Fiber Ports

STRIDE SlimLine industrial managed 5-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, three 10/100BaseT RJ45 Ethernet ports and two multi-mode 100BaseFX ST or SC fiber ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

2-Year Warranty

Inches [mm]



SCREW MOUNTING LOCATIONS		
SCREW	SIZE	DIM "A"
#6	5.05	[128.3]
#8	5.10	[129.5]
#10	5.15	[130.8]
#12	5.20	[132.1]



SE-SW5M-2ST

with 2 ST type fiber ports



SE-SW5M-2SC

with 2 SC type fiber ports



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port adjacent to the fiber port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW5M-2ST and SE-SW5M-2SC 5-Port Ethernet switches with fiber port.

Input power (typical with all ports active at 100 Mbps)	5.6 W
Weight	8 oz (0.23 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride® Managed Industrial Ethernet Switches

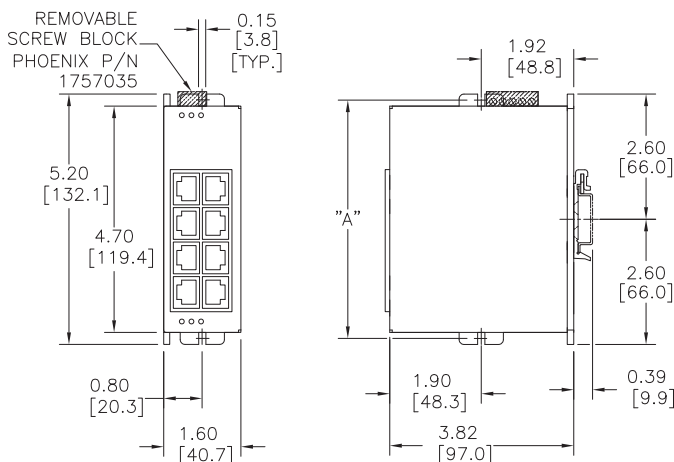
8-Port Managed Ethernet Switch

STRIDE SlimLine industrial managed 8-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

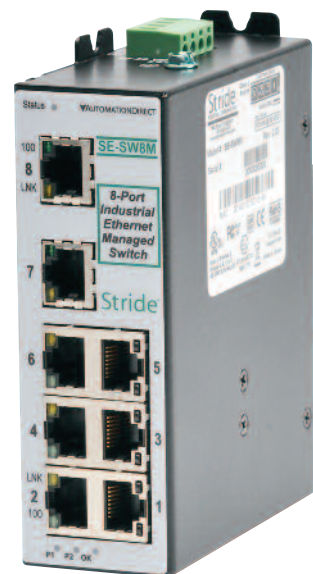
2-Year Warranty

Dimensions

Inches [mm]



SCREW MOUNTING LOCATIONS		
SCREW SIZE	DIM "A"	
#6	5.05	[128.3]
#8	5.10	[129.5]
#10	5.15	[130.8]
#12	5.20	[132.1]



SE-SW8M

<--->

ACT/LNK/Speed LED

This is a bi-color (**green/yellow**) LED on models with one LED per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Specifications

The following are specifications relevant to the SE-SW8M 8-port Ethernet switch.

Input power (typical with all ports active at 100 Mbps)	4.3 W
Weight	10 oz (0.28 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

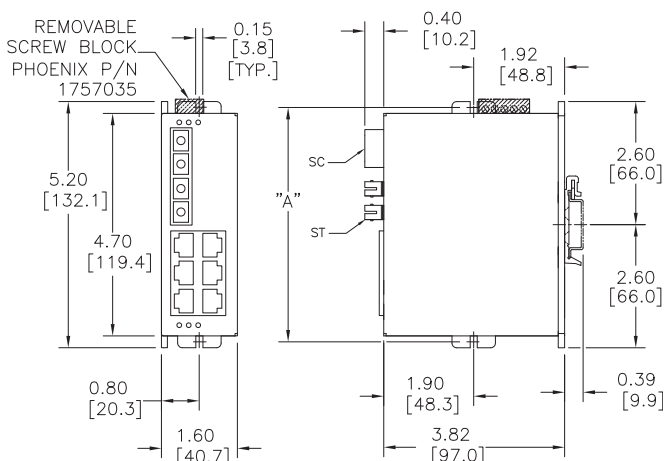
Stride Managed Industrial Ethernet Switches

8-Port Managed Ethernet Switch with Two Fiber Ports

STRIDE SlimLine industrial managed 8-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, six 10/100BaseT RJ45 Ethernet ports and two multi-mode 100BaseFX fiber ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



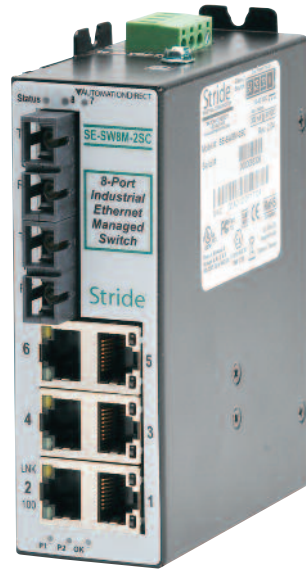
SCREW MOUNTING LOCATIONS		
SCREW SIZE	DIM "A"	
#6	5.05	[128.3]
#8	5.10	[129.5]
#10	5.15	[130.8]
#12	5.20	[132.1]

2-Year Warranty



SE-SW8M-2ST

with 2 ST type fiber ports



SE-SW8M-2SC

with 2 SC type fiber ports



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port adjacent to the fiber port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW8M-2ST and SE-SW8M-2SC 8-port Ethernet switches with fiber port.

Input power (typical with all ports active at 100 Mbps)	6.3 W
Weight	10 oz (0.28 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride® Managed Industrial Ethernet Switches

Specifications for SE-SW5M, SE-SW5M-2ST, SE-SW5M-2SC, SE-SW8M, SE-SW8M-2ST and SE-SW8M-2SC

General Specifications	
Ethernet switch type	Industrial Ethernet managed switch with 5 or 8 ports
Operating mode	Store and forward wire speed switching, non-blocking. Broadcast and multicast storm protection
Devices supported	All IEEE 802.3 compliant devices are supported
Ethernet compliance	IEEE 802.3 (10Mbps Ethernet supports legacy devices) IEEE 802.3u (Fast Ethernet 100Mbps for newer devices) IEEE 802.3x (Full-Duplex with Flow Control) IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability) IEEE 802.1p (Priority Queuing – QoS, CoS, ToS/DS) IEEE 802.1Q (VLAN for traffic segregation) IEEE 802.3ab
Ethernet protocols supported	SNMPv1 / v2 / v3, RMON, DHCP, SNTP, TFTP, STP, RSTP, QoS / CoS / ToS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TLS), Telnet, SSH and more
Industrial protocols supported	Modbus / TCP, EtherNet / IP, PROFINet, Foundation Fieldbus HSE and others
MAC addresses	2048 addresses
Memory bandwidth	3.2 Gbps
Latency (typical)	10M ports 16 µs + frame time 100M ports 5 µs + frame time
Power input (typical - all ports active at 100 Mbps)	SE-SW5M - 3.6 W SE-SW5M-2ST / -2SC - 4.3 W SE-SW8M - 5.6 W SE-SW8M-2ST / -2SC - 6.3 W
Redundant input terminals	
Input voltage	10-30 VDC (continuous) - Class 2 Power Supply
Reverse power protection	Yes
“OK” output	
Indicates power and operational status	Voltage same as switch input voltage Maximum current output 0.5 Amp
Transient protection	15,000 watts peak
Spike protection	5,000 watts (10x for 10 µs)
Ethernet isolation	1500 VRMS 1 minute
Operating temperature range	-40 to +75°C (cold startup at -40°C), -40 to +167°F (cold startup at -40°F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	For use in Pollution Degree 2 environment. No corrosive gases permitted
Vibration and shock	IEC60068-2-6, -27 and -32
Agency Approvals	Electrical safety: UL1604 (Class 1, Div 2, Group A, B, C, D) E200031 CSA C22.2/14; EN61010-1, CE Marine and offshore rated per ABS
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	IEC61000-6-2, CE
Eye safety (fiber models)	IEC60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11
RoHS and WEEE	RoHS and WEEE compliant
Packaging and protection	Aluminum case; IP30

Copper RJ45 Ports:	
RJ45 ports	Shielded RJ45 10/100 fully 802.3 compliant
RJ45 speed and duplex	Configurable or 10/100 auto-negotiating
MDI / MDIX	Auto-mdi / mdix-crossover automatically supports either straight or crossed cables
Polarity	Auto-polarity for automatic correction of crossed TXD and RXD pairs
Modes	Full or half duplex operation with flow control supported on all ports

Fiber Ports	
2 optional multimode fiber optic ports (-ST or -SC models)	
Fiber optic port speed	100BaseFX (100 Mbps)
Fiber optic port wavelength	1310 nm center
Fiber	50 or 62.5/125 µm (SC or ST)
Fiber max. distance (full duplex)	4 km (2.5 miles)

Console ports: USB and RS232 (RJ45)	
Management interfaces	Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)
Console ports are located on the bottom surface of the switch.	

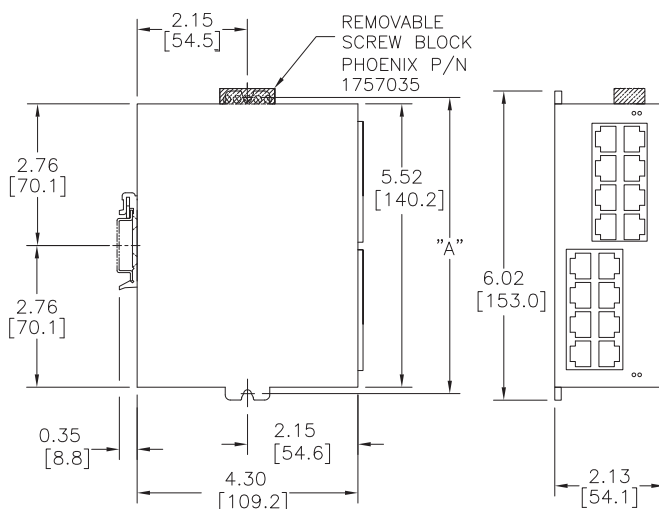
Stride[®] Managed Industrial Ethernet Switches

16-Port Managed Ethernet Switch

STRIDE SlimLine industrial managed 16-port Ethernet switch, metal housing, operating temperature range of -40 to +75 deg. C, sixteen 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

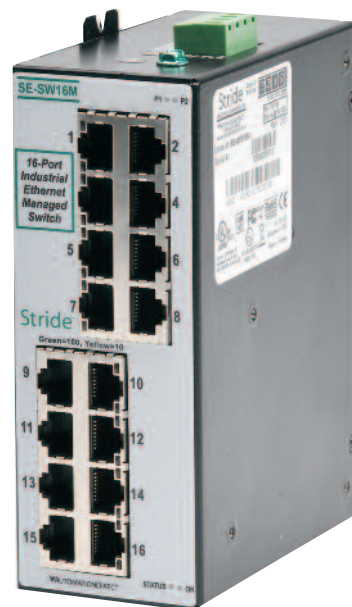
Dimensions

Inches [mm]



SCREW MOUNTING LOCATIONS		
SCREW SIZE	DIM "A"	
#6	5.87	[149.1]
#8	5.92	[150.4]
#10	5.97	[151.6]
#12	6.02	[152.9]

2-Year Warranty



SE-SW16M



ACT/LNK/Speed LED

This is a bi-color (green/yellow) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW16M 16-port Ethernet switch.

Input power (typical with all ports active at 100 Mbps)	7W
Weight	12 oz (0.34 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride[®] Managed Industrial Ethernet Switches

Specifications for SE-SW16M

General Specifications	
Ethernet switch type	Industrial Ethernet managed switch with 16 ports
Operating mode	Store and forward wire speed switching, non-blocking. Broadcast and multicast storm protection
Devices supported	All IEEE 802.3 compliant devices are supported
Ethernet compliance	IEEE 802.3 (10Mbps Ethernet supports legacy devices) IEEE 802.3u (Fast Ethernet 100Mbps for newer devices) IEEE 802.3x (Full-Duplex with Flow Control) IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability) IEEE 802.1p (Priority Queuing – QoS, CoS, ToS/DS) IEEE 802.1Q (VLAN for traffic segregation) IEEE 802.3ab/z
Ethernet protocols supported	SNMPv1 / v2 / v3, RMON, DHCP, SNMP, TFTP, STP, RSTP, QoS / CoS / ToS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TLS), Telnet, SSH and more
Industrial protocols supported	Modbus / TCP, EtherNet / IP, PROFINet, Foundation Fieldbus HSE and others
MAC addresses	8192 addresses
Memory bandwidth	32 Gbps
Latency (typical)	10M ports 16 μ s + frame time 100M ports 5 μ s + frame time
Power input (typical - all ports active at 100 Mbps) Redundant input terminals	7W
Input voltage	10-30 VDC (continuous) - Class 2 Power Supply
Reverse power protection	Yes
“OK” output Indicates power and operational status	Voltage same as switch input voltage Maximum current output 0.5 Amp
Transient protection	15,000 watts peak
Spike protection	5,000 watts (10x for 10 μ S)
Ethernet isolation	1500 VRMS 1 minute
Operating temperature range	-40 to +75°C (cold startup at -40°C), -40 to +167°F (cold startup at -40°F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	For use in Pollution Degree 2 environment. No corrosive gases permitted
Vibration and shock	IEC60068-2-6, -27 and -32
Agency Approvals	Electrical safety: UL1604 (Class 1, Div 2, Group A, B, C, D) E200031 CSA C22.2/14; EN61010-1, CE Marine and offshore rated per ABS
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	IEC61000-6-2, CE
Eye safety (fiber models)	IEC60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11
RoHS and WEEE	RoHS and WEEE compliant
Packaging and protection	Aluminum case; IP30

Copper RJ45 Ports:	
RJ45 ports	Shielded RJ45 10/100 fully 802.3 compliant
RJ45 speed and duplex	Configurable or 10/100 auto-negotiating
MDI / MDIX	Auto-mdi / mdix-crossover automatically supports either straight or crossed cables
Polarity	Auto-polarity for automatic correction of crossed TXD and RXD pairs
Modes	Full or half duplex operation with flow control supported on all ports

Console ports: USB and RS232 (RJ45)	
Management interfaces	Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)
Console ports are located on the bottom surface of the switch.	

Stride[®] Managed Industrial Ethernet Switches

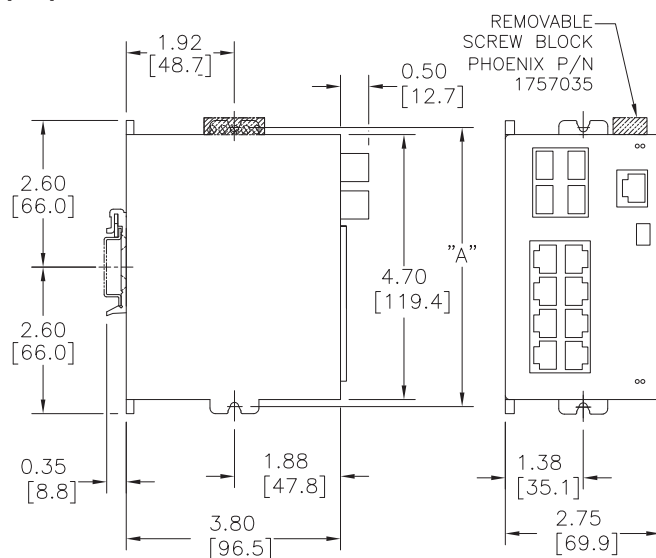
8-Port Gigabit Managed Ethernet Switch

STRIDE™ SlimLine industrial managed 8-port Ethernet switch with all Gigabit ports, metal housing, operating temperature range of -40 to +75 deg. C, eight 10/100/1000BaseT RJ45 Ethernet ports and four advanced combination SFP ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked. Optional SFP modules sold separately.

2-Year Warranty

Dimensions

Inches [mm]



SCREW MOUNTING LOCATIONS	
SCREW SIZE	DIM "A"
#6	5.05 [128.3]
#8	5.10 [129.5]
#10	5.15 [130.8]
#12	5.20 [132.1]

ACT/LNK/Speed LED

This is a bi-color (**green/yellow**) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW8MG-4P 8-port Ethernet switch.

Input power (typical with all ports active at 100 Mbps)	12W with no fiber transceivers 15W with four fiber transceivers
Weight	12 oz (0.34 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)



SE-SW8MG-4P



Stride[®] Managed Industrial Ethernet Switches

Specifications for SE-SW8MG-4P

General Specifications	
Ethernet switch type	8-Port Managed, All ports 10/100/1000
Operating mode	Store and forward wire speed switching, non-blocking. Broadcast and multicast storm protection
Devices supported	All IEEE 802.3 compliant devices are supported
Ethernet compliance	IEEE 802.3 (10Mbps Ethernet supports legacy devices) IEEE 802.3u (Fast Ethernet 100Mbps for newer devices) IEEE 802.3x (Full-Duplex with Flow Control) IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability) IEEE 802.1p (Priority Queuing – QoS, CoS, ToS/DS) IEEE 802.1Q (VLAN for traffic segregation) IEEE 802.3ab/z
Ethernet protocols supported	SNMPv1 / v2 / v3, RMON, DHCP, SNMP, TFTP, STP, RSTP, QoS / CoS / ToS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TLS), Telnet, SSH and more
Industrial protocols supported	Modbus / TCP, EtherNet / IP, PROFINet, Foundation Fieldbus HSE and others
MAC addresses	8192 addresses
Memory bandwidth	32 Gbps
Latency (typical)	< 5 us + frame time
Power input	12 W (with no fiber transceivers); 15 W (with four fiber transceivers)
Redundant input terminals	
Input voltage	10-30 VDC (continuous) - Class 2 Power Supply
Reverse power protection	Yes
“OK” output	
Indicates power and operational status	Voltage same as switch input voltage Maximum current output 0.5 Amp
Transient protection	15,000 watts peak
Spike protection	5,000 watts (10x for 10 uS)
Ethernet isolation	1500 VRMS 1 minute
Operating temperature range	-40 to +75°C (cold startup at -40°C), -40 to +167°F (cold startup at -40°F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	For use in Pollution Degree 2 environment. No corrosive gases permitted
Vibration and shock	IEC60068-2-6, -27 and -32
Agency Approvals	Electrical safety: UL1604 (Class 1, Div 2, Group A, B, C, D) E200031 CSA C22.2/14; EN61010-1, CE Marine and offshore rated per ABS
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	EMC: FCC part 15, ICES-003; EN55022, EN61000-6-2/4, CE
RoHS and WEEE	RoHS and WEEE compliant
Packaging and protection	Corrosion-resistant aluminum case; IP40 protection from dust and debris

Copper RJ45 Ports: Gigabit	
RJ45 ports	Eight RJ45 10/100/1000 fully 802.3z compliant Note Four ports are combination Gigabit ports that have both a RJ45 connector and SFP cage. For each of these ports only one connector can be used at a time.
RJ45 speed and duplex	Configurable or 10/100/100 auto-detecting for speed and duplex (full or half)
RJ45 MDI / MDIX	Auto-mdi / mdix-crossover automatically supports either straight or crossed cables
RJ45 Polarity	Auto-polarity for automatic correction of crossed TXD and RXD pairs
Modes	Full or half duplex operation with flow control supported on all ports

SFP	
	SFP (pluggable) ports accept Mini-GBIC (SFP) transceivers with a speed of 1000Mbps or 100Mbps
	See separate datasheet for optional fiber transceiver specifications

Console ports: USB and RS232 (RJ45)	
Management interfaces	Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)

Stride® Managed Industrial Ethernet Switches

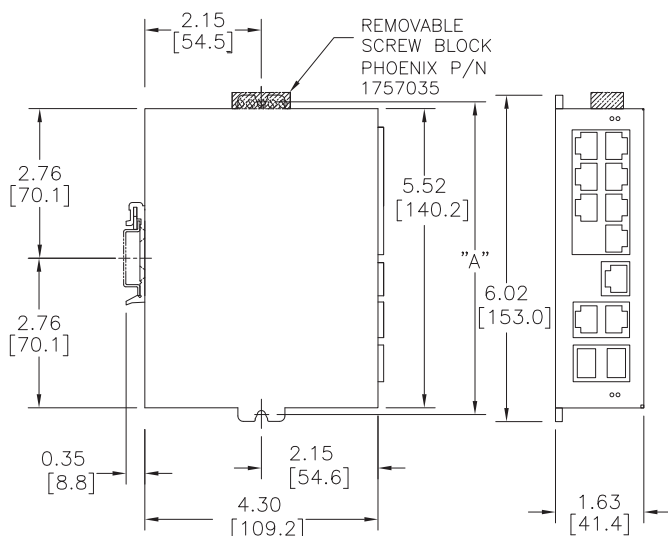
10-Port Gigabit Managed Ethernet Switch

STRIDE SlimLine industrial managed 10-port Ethernet switch with Gigabit ports, metal housing, operating temperature range of -40 to +75 deg. C, seven 10/100BaseT RJ45 Ethernet ports, one Gigabit RJ45 port and two Gigabit advanced combination SFP ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked. Optional SFP modules sold separately

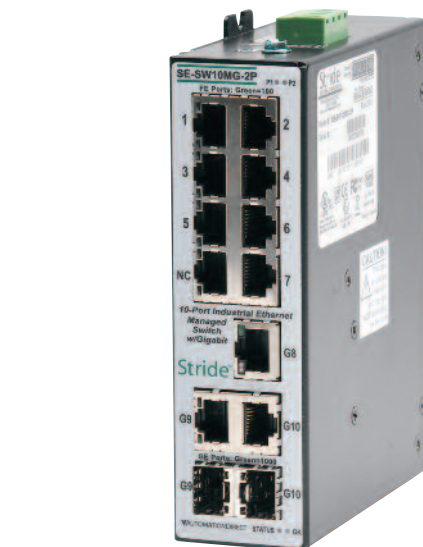
2-Year Warranty

Dimensions

Inches [mm]



SCREW MOUNTING LOCATIONS	
SCREW SIZE	DIM "A"
#6	5.87 [149.1]
#8	5.92 [150.4]
#10	5.97 [151.6]
#12	6.02 [152.9]



SE-SW10MG-2P



ACT/LNK/Speed LED

This is a bi-color (**green/yellow**) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW10MG-2P 10-port Ethernet switch.

Input power (typical with all ports active at 100 Mbps)	5W (no fiber) 7W (with 2 fiber ports)
Weight	12 oz (0.34 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride[®] Managed Industrial Ethernet Switches

Specifications for SE-SW10MG-2P

General Specifications	
Ethernet switch type	10-Port Managed, three ports are Gigabit Ethernet seven ports are 10/100
Operating mode	Store and forward wire speed switching, non-blocking. Broadcast and multisorm protection
Devices supported	All IEEE 802.3 compliant devices are supported
Ethernet compliance	IEEE 802.3 (10Mbps Ethernet supports legacy devices) IEEE 802.3u (Fast Ethernet 100Mbps for newer devices) IEEE 802.3x (Full-Duplex with Flow Control) IEEE 802.1D/w (Rapid Spanning Tree for redundant rings and Spanning Tree for interoperability) IEEE 802.1p (Priority Queueing – QoS, CoS, ToS/DS) IEEE 802.1Q (VLAN for traffic segregation) IEEE 802.3ab/z
Ethernet protocols supported	SNMPv1 / v2 / v3, RMON, DHCP, SNTP, TFTP, STP, RSTP, QoS / CoS / ToS / DS, IGMPv1 / v2, VLAN (tag and port based), HTTP, HTTPS (SSL and TLS), Telnet, SSH and more
Industrial protocols supported	Modbus / TCP, EtherNet / IP, PROFINet, Foundation Fieldbus HSE and others
MAC addresses	8192 addresses
Memory bandwidth	32 Gbps
Latency (typical)	< 5 μ s + frame time
Power input	5 W (with no fiber transceivers); 7 W (with two fiber transceivers)
Redundant input terminals	
Input voltage	10-30 VDC (continuous) – Class 2 Power Supply
Reverse power protection	Yes
“OK” output	
Indicates power and operational status	Voltage same as switch input voltage Maximum current output 0.5 Amp
Transient protection	15,000 watts peak
Spike protection	5,000 watts (10x for 10 μ s)
Ethernet isolation	1500 VRMS 1 minute
Operating temperature range	-40 to +75°C (cold startup at -40°C), -40 to +167°F (cold startup at -40°F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)
Humidity (non-condensing)	5 to 95% RH
Environmental Air	For use in Pollution Degree 2 environment. No corrosive gases permitted
Vibration and shock	IEC60068-2-6, -27 and -32
Agency Approvals	Electrical safety: UL1604 (Class 1, Div 2, Group A, B, C, D) E200031 CSA C22.2/14; EN61010-1, CE Marine and offshore rated per ABS
EMI emissions	FCC part 15, ICES-003, EN55022
EMC immunity	EMC: FCC part 15, ICES-003; EN55022, EN61000-6-2/4, CE
RoHS and WEEE	RoHS and WEEE compliant
Packaging and protection	Corrosion-resistant aluminum case; IP40 protection from dust and debris

Copper RJ45 Ports: (10/100BaseT)	
10/100 RJ45 ports	Seven RJ45 10/100 ports fully IEEE 802.3 compliant
10/100 RJ45 speed and duplex	Configurable or 10/100 auto-detecting for speed and duplex (full or half)
RJ45 MDI / MDIX	Auto-mdi / mdix-crossover automatically supports either straight or crossed cables
RJ45 Polarity	Auto-polarity for automatic correction of crossed TXD and RXD pairs
Modes	Full or half duplex operation with flow control supported on all ports

Copper RJ45 Ports: Gigabit	
RJ45 ports	Three RJ45 10/100/1000 fully 802.3z compliant Note: Two ports are combination Gigabit ports that have both a RJ45 connector and SFP cage. For each of these ports only one connector can be used at a time.
RJ45 speed and duplex	Configurable or 10/100/1000 auto-detecting for speed and duplex (full or half)
RJ45 MDI / MDIX	Auto-mdi / mdix-crossover automatically supports either straight or crossed cables
RJ45 Polarity	Auto-polarity for automatic correction of crossed TXD and RXD pairs
Modes	Full or half duplex operation with flow control supported on all ports

SFP Ports	
SFP (pluggable) ports accept Mini-GBIC (SFP) transceivers with a speed of 1000Mbps or 100Mbps	
See separate datasheet for optional fiber transceiver specifications	

Console ports: USB and RS232 (RJ45)	
Management interfaces	Text (Telnet and SSH), CLI (command line interface) and SNMP (see the user manual for supported MIBs)
Console ports are located on the bottom surface of the switch.	

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IEN magazine March 2009

Stride Unmanaged Industrial Ethernet Switches & Media Converter

Unmanaged Switches offer Deterministic Control

The Stride unmanaged switches automatically determine and remember where each Ethernet device is located and route messages only through the appropriate port. This gives devices on the network an open communications channels and helps minimize network loading. Another benefit is the 10/100 auto-speed selection that enhances the performance of 10 Mbps Ethernet devices by speeding up their message transmissions to 100 Mbps when they are passed to a faster Ethernet backbone.

Increased Reliability

The Stride Ethernet switches have been designed for the industrial environment. They will survive extreme temperatures, as well as dirty, unreliable industrial power. Meeting UL 1604 (Class I Div. 2), and the IEC68-2 standard for vibration resilience, the Stride switches will provide years of reliable performance in applications too tough for commercial grade switches.

Simple Installation

With no user setup required, the Stride unmanaged switches and media converters will immediately start operating as soon as you power them up and connect them to the network.

Unmanaged Switches

Mounting Options: Snaps to standard 35mm x 7.5mm height DIN rail (EN50022). The (-WT) metal housing versions also offer various mounting options.

Fiber LED to indicate a proper connection for the fiber connectors and network activity.

Fiber Optic Port on selected models. Multi-mode fiber optic port with ST or SC type connector that supports half and full duplex with a maximum distance of 4km.

Activity, Link and Speed LEDs are integrated into the RJ45 ports.

RJ45 Ports that are fully IEEE 802.3 compliant with 10/100 auto-detecting for speed and duplex (full or half).

Auto crossover (MDI/MDIX) automatically supports either straight or crossed cables which greatly reduces cable installation errors.



Redundant Power Inputs

Dual power inputs with industrial surge and spike protection help reduce down time when there is primary power loss. Reverse power protection is also supported.

Power LED to indicate power on P1 or P2 power inputs.

DIN Rail Mount

Snaps to standard 35mm x 7.5mm height DIN rail (EN50022).

Industrial Temperature Ranges

Plastic Models:

-10 to +60 °C (+14 to +140 °F) operating temperature range

Metal Models (-WT):

-40 to +85 °C (-40 to +185 °F) operating temperature range. 5 to 95% RH humidity range (non-condensing).
















Agency Approvals:

UL1604, CSA C22.2/213 (Class I, Div.2)
EN50021/EN60079-15

Model SE-SW5U-ST-WT shown above. For detailed specifications on all models, see following pages

Stride Unmanaged Switches Selection Guide

At a glance...

Standard Temperature Range			Wide Temperature Range		
Part Number	Description	Price	Part Number	Description	Price
SE-SW5U			SE-SW5U-WT		
	STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->		STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to +85 °C, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->
SE-SW8U			SE-SW8U-WT		
	STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->		STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to +85 °C, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->
SE-SW5U-ST	SE-SW5U-ST-WT utilizes ST fiber ports		SE-SW5U-ST-WT	SE-SW5U-ST-WT utilizes ST fiber ports	
SE-SW5U-SC	SE-SW5U-SC-WT utilizes SC fiber ports		SE-SW5U-SC-WT	SE-SW5U-SC-WT utilizes SC fiber ports	
	STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, four 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->		STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to +85 °C, four 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->
SE-SW9U-ST	SE-SW9U-ST utilizes ST fiber ports		SE-SW9U-ST-WT	SE-SW9U-ST-WT utilizes ST fiber ports	
SE-SW9U-SC	SE-SW9U-SC utilizes SC fiber ports		SE-SW9U-SC-WT	SE-SW9U-SC-WT utilizes SC fiber ports	
	STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, eight 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->		STRIDE™ SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to +85 °C, eight 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->
SE-MC2U-ST	SE-SW2U-ST utilizes ST fiber ports		<div>  NOTE: -WT models have a metal case and are rated for a wider temperature range from -40 ° to 85 °C. </div> <div>  Electrical Safety </div> <div>  European Directives </div> <div>  US Emissions </div> <div>  WEEE Compliant </div> <div>  RoHS Compliant </div>		
SE-MC2U-SC	SE-SW2U-SC utilizes SC fiber ports				
	STRIDE™ SlimLine Industrial Unmanaged Ethernet Media Converter, plastic case, -10 to +60 °C operating temperature range, one 10/100BaseT auto-detecting, auto-crossover and auto-polarity RJ45 Ethernet port and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.	<--->			

All part numbers are rated Class I, Div 2.

Stride Unmanaged Industrial Ethernet Switches & Media Converter

General Specifications		
Ethernet switch type	Up to 9 ports	
Operating mode	Store and forward wire speed switching, non-blocking	
Devices supported	All IEEE 802.3 compliant devices are supported	
Standards	IEEE 802.3, 802.3u, 802.3x	
MAC addresses	1024 addresses	
Memory bandwidth	3.2 Gbps	
Latency for 10 Mbps ports	16 us + frame time (typical)	
Latency for 100 Mbps ports	5 us + frame time (typical)	
Power input	Redundant Input Terminals	
Input power (typical with all ports active at 100 Mbps)	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW5U-WT	2.0 W
	SE-SW5U-ST SE-SW5U-SC SE-SW5U-ST-WT SE-SW5U-SC-WT	3.0 W
	SE-SW8U SE-SW8U-WT	4.0 W
	SE-SW9U-ST SE-SW9U-SC SE-SW9U-ST-WT SE-SW9U-SC-WT	5.0 W
Input voltage	10-30 VDC (continuous) - Class 2 Power Supply	
Reverse power protection	Yes	
Transient protection	15,000 watts peak	
Spike protection	5,000 watts (10x for 10 us)	
Ethernet isolation	1500 VRMS 1 minute	
Operating temperature range	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW8U SE-SW5U-ST SE-SW5U-SC SE-SW9U-ST SE-SW9U-SC	-10 to +60 °C (+14 to +140 °F), cold startup at -10 °C (+14 °F)
	SE-SW5U-WT SE-SW8U-WT SE-SW5U-ST-WT SE-SW5U-SC-WT SE-SW9U-ST-WT SE-SW9U-SC-WT	-40 to +85 °C (-40 to +185 °F), cold startup at -40 °C (-40 °F)
Storage temperature range	-40 to +85 °C (-40 to +185 °F)	
Humidity (non-condensing)	5 to 95% RH	
Environmental Air	No corrosive gasses permitted	
Vibration, shock & freefall	IEC68-2-6, -27, -32	
Agency Approvals	UL/cUL 508, CSA C22 per EN61010-1, UL/cUL 1604 (Class 1, Div. 2, Groups A, B, C, D), CSA C 22.2/213 9 per EN50021/EN60079-15 (Zone 2, Category 3), CE (ATEX)	
EMI emissions	FCC part 15, ICES-003, EN55022	
EMC immunity	IEC61326-1	
RoHS and WEEE	RoHS (Pb free) and WEEE compliant	
Environmental Air	For use in Pollution Degree 2 environment	

General Specifications Cont'd		
Packaging and protection	SE-MC2U-ST SE-MC2U-SC SE-SW5U SE-SW8U SE-SW5U-ST SE-SW5U-SC SE-SW9U-ST SE-SW9U-SC	UL94V0 Lexan, IP30
	SE-SW5U-WT SE-SW8U-WT SE-SW5U-ST-WT SE-SW5U-SC-WT SE-SW9U-ST-WT SE-SW9U-SC-WT	Aluminum IP30
Dimensions (L x W x H)	See mechanical diagrams for details	

Copper RJ45 Ports: (10/100BaseT)	
10/100BaseT ports	Shielded RJ45
Protocols supported	All standard IEEE 802.3
Ethernet compliancy	IEEE 802.3, 802.3u, 802.3x
Auto-crossover	Yes, allows you to use straight-through or crossover wired cables
Auto-sensing operation	Yes, Full and half duplex
Auto-negotiating	Yes, 10BaseT and 100BaseT
Auto-polarity	Yes, on the TD and RD pair
Flow control	Automatic
Ethernet isolation	1500 VRMS 1 minute
Plug and play	Yes
Cable requirements	Twisted pair (Cat. 5 or better) (shielded recommended)
Max. cable distance	100 meters

Fiber Port: (100BaseFX multimode)	
100BaseFX ports	1
Fiber port mode	Multimode (mm)
Fiber port connector	ST – models SE-XXXX-ST and SE-XXXX-ST-WT SC – models SE-XXXX-SC and SE-XXXX-SC-WT
Optimal fiber cable	50/125 or 62.5/125 µm
Center wavelength	1300 nm
Multimode	Links up to 4 km typ.; 1300 nm; use with 50 or 62.5/125 um fiber > Transmitter power (dB): -21 min, -17 typ, -14 max > Receiver sensitivity (dB): -34 typ, -31 max
Nominal max. distance (full duplex)	4 km
Half and full duplex	Full duplex
Ethernet compliance	100BaseFX
Eye safety (laser)	IEC 60825-1, Class 1; FDA 21 CFR 1040.10 and 1040.11

Complete documentation

Documentation can be downloaded from
www.automationdirect.com.

Stride Unmanaged Industrial Ethernet Switches & Media Converter

Installation

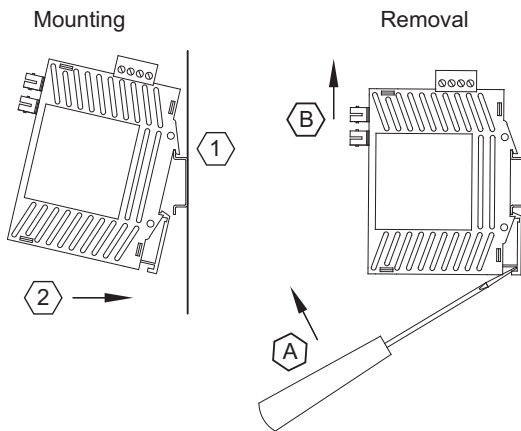
DIN Rail Mounting: Plastic Case

DIN rail mounting steps:

1. Hook top back of unit over the DIN rail.
2. Push bottom back onto the DIN rail until it snaps into place.

DIN rail removal steps:

- A. Insert screwdriver into DIN clip and pry until it releases from the DIN rail.
- B. Unhook top of unit from DIN rail.



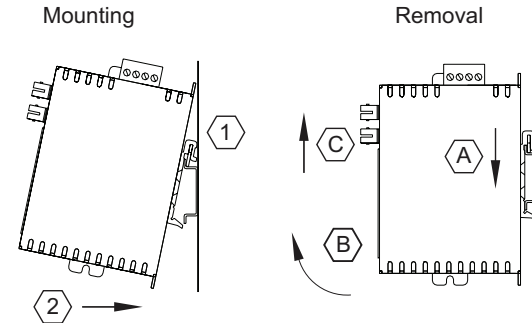
DIN Rail Mounting: Metal Case

DIN rail mounting steps:

1. Hook top back of unit over the DIN rail.
2. Push bottom back onto the DIN rail until it snaps into place.

DIN rail removal steps:

- A. Push the unit down to free the bottom of the DIN rail.
- B. Rotate the bottom of the unit away from the DIN rail.
- C. Unhook top of unit from DIN rail.



Optional Mounting



Vertical screw to panel mount.

For better shock and vibration resistance
(Metal cased models only)

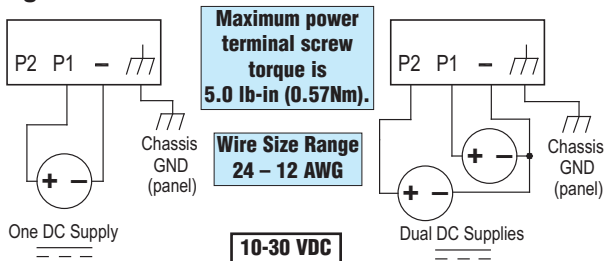


Flat screw to panel mount.

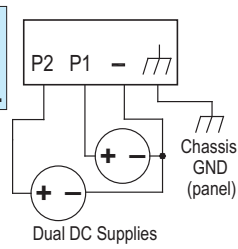
For a low profile orientation in shallow boxes plus the best shock
and vibration resistance.

Power wiring

Single DC Power



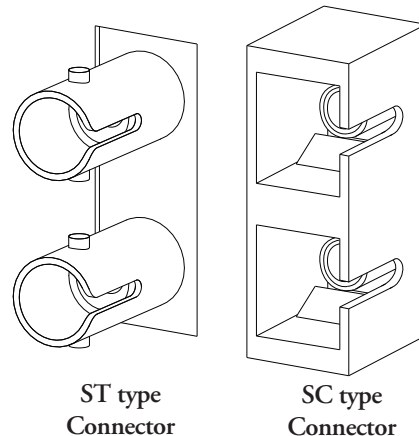
Redundant DC Power



A recommended DC power supply is
AutomationDirect.com Part number PSC-24-015.

The power connection terminal block is
removable for access to the mounting tab.

ST or SC Fiber Connector



ST type
Connector

SC type
Connector

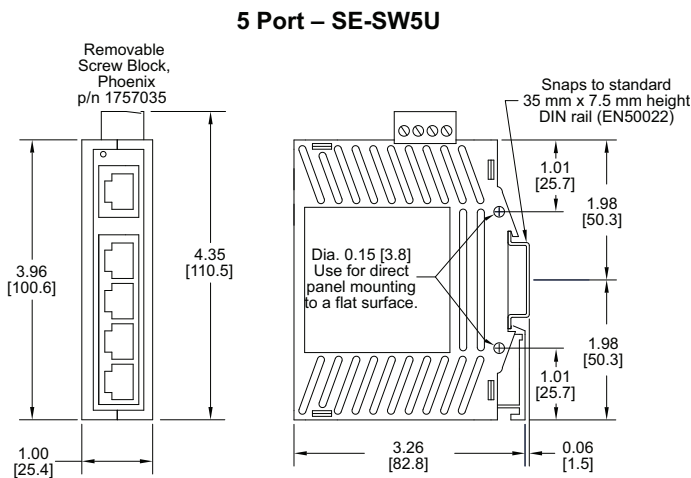
Stride Unmanaged Industrial Ethernet Switches

5-Port Ethernet Switch - Plastic Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW5U



ACT/LNK LED

This is the **Yellow** LED on models with a Yellow and a Green LED per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with a Yellow and a Green LED per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Specifications

The following are specifications relevant to the SE-SW5U 5-Port Ethernet Switch.

Input power (typical with all ports active at 100 Mbps)	2.0 W
Weight	4 oz (0.11 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

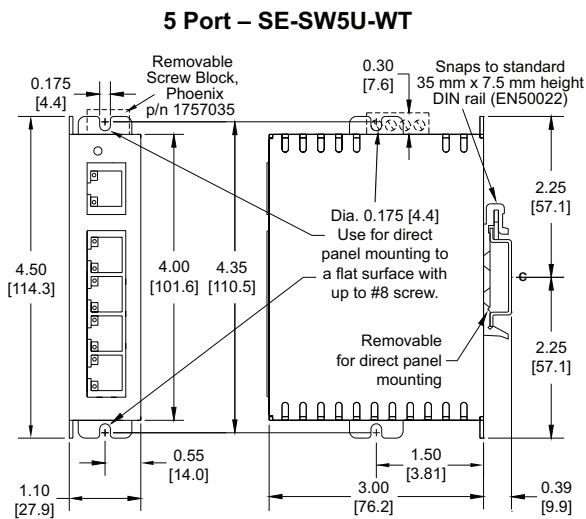
Stride Unmanaged Industrial Ethernet Switches

5-Port Ethernet Switch - Metal Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to +85 °C, five 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW5U-WT



ACT/LNK LED

This is the **Yellow** LED on models with a Yellow and a Green LED per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with a Yellow and a Green LED per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Specifications

The following are specifications relevant to the SE-SW5U-WT 5-Port Ethernet Switch.

Input power (typical with all ports active at 100 Mbps)	2.0 W
Weight	6 oz (0.17 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

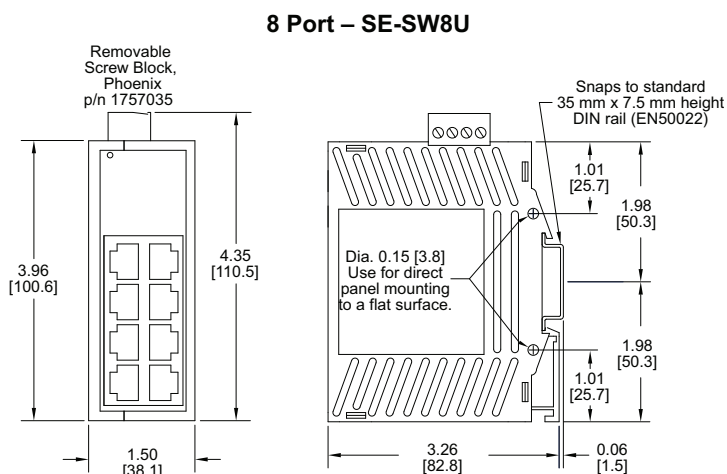
Stride Unmanaged Industrial Ethernet Switches

8-Port Ethernet Switch - Plastic Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW8U

<--->

ACT/LNK/Speed LED

This is a bi-color (**green/yellow**) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW8U 8-Port Ethernet Switch.

Input power (typical with all ports active at 100 Mbps)	4.0 W
Weight	6 oz (0.17 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

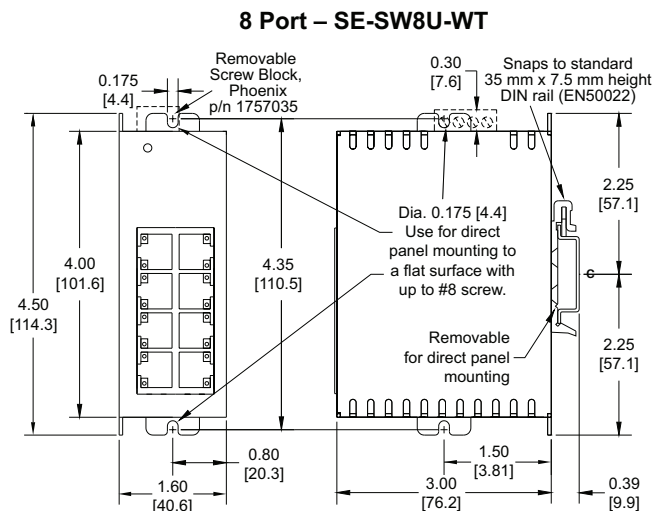
Stride Unmanaged Industrial Ethernet Switches

8-Port Ethernet Switch - Metal Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to + 85 °C, eight 10/100BaseT RJ45 Ethernet ports. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW8U-WT



ACT/LNK/Speed LED

This is a bi-color (green/yellow) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW8U-WT 8-Port Ethernet Switch.

Input power (typical with all ports active at 100 Mbps)	4.0 W
Weight	8 oz (0.23 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

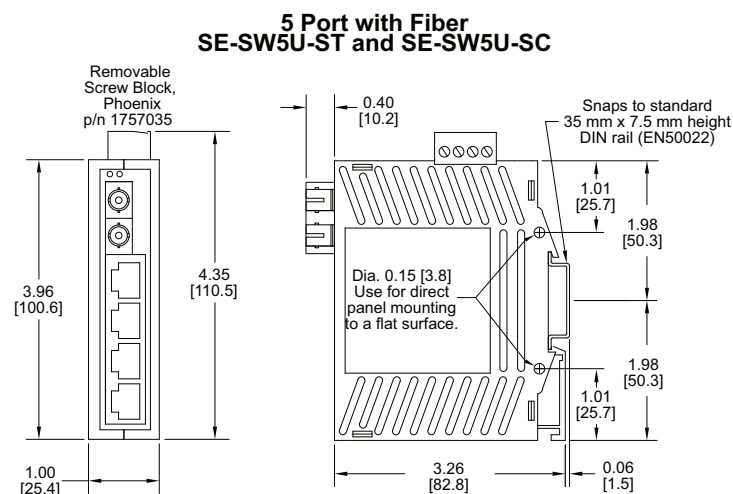
Stride Unmanaged Industrial Ethernet Switches

5-Port Ethernet Switch with Fiber Port - Plastic Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, four 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW5U-ST

with one ST type fiber port

SE-SW5U-SC

with one SC type fiber port



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW5U-ST and SE-SW5U-SC 5-Port Ethernet Switches with Fiber Port.

Input power (typical with all ports active at 100 Mbps)	3.0 W
Weight	4 oz (0.11 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

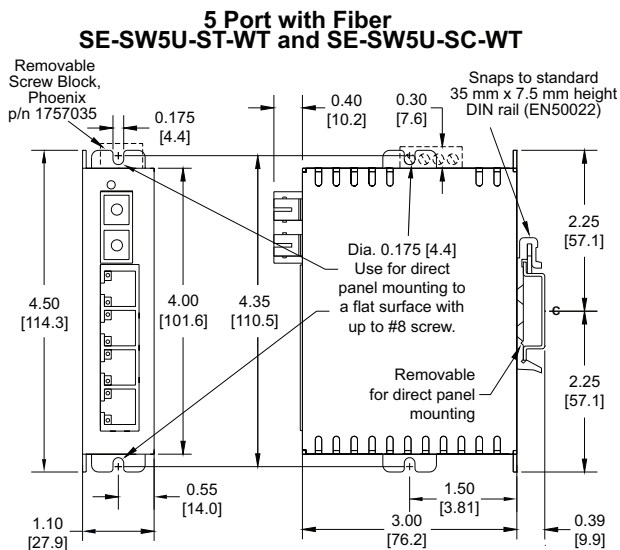
Stride Unmanaged Industrial Ethernet Switches

5-Port Ethernet Switch with Fiber Port - Metal Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to + 85 deg C, four 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW5U-ST-WT

with one ST type fiber port

SE-SW5U-SC-WT

with one SC type fiber port



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port adjacent to the fiber port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW5U-ST-WT and SE-SW5U-SC-WT 5-Port Ethernet Switches with Fiber Port.

Input power (typical with all ports active at 100 Mbps)	3.0 W
Weight	6 oz (0.17 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

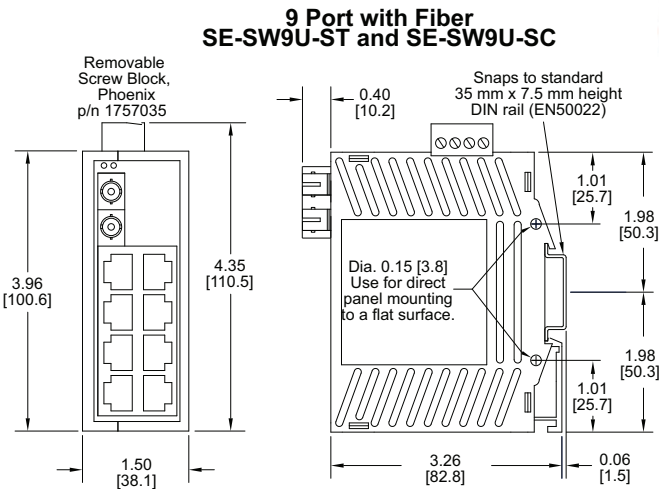
Stride® Unmanaged Industrial Ethernet Switches

9-Port Ethernet Switch with Fiber Port - Plastic Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, plastic case, -10 to +60 °C operating temperature range, eight 10/100BaseT RJ45 Ethernet ports and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-SW9U-ST

with one ST type fiber port

SE-SW9U-SC

with one SC type fiber port



ACT/LNK/Speed LED

This is a bi-color (**green/yellow**) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW9U-ST and SE-SW9U-SC 9-Port Ethernet Switches with Fiber Port.

Input power (typical with all ports active at 100 Mbps)	5.0 W
Weight	6 oz (0.17 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Stride[®] Unmanaged Industrial Ethernet Switches

9-Port Ethernet Switch with Fiber Port - Metal Case

STRIDE SlimLine Industrial Unmanaged Ethernet Switch, metal case, wide operating temperature range -40 to + 85 °C , eight 10/100BaseT RJ45 Ethernet ports and one multi-mode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, auto-crossover, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.



SE-SW9U-ST-WT

with one ST type fiber port

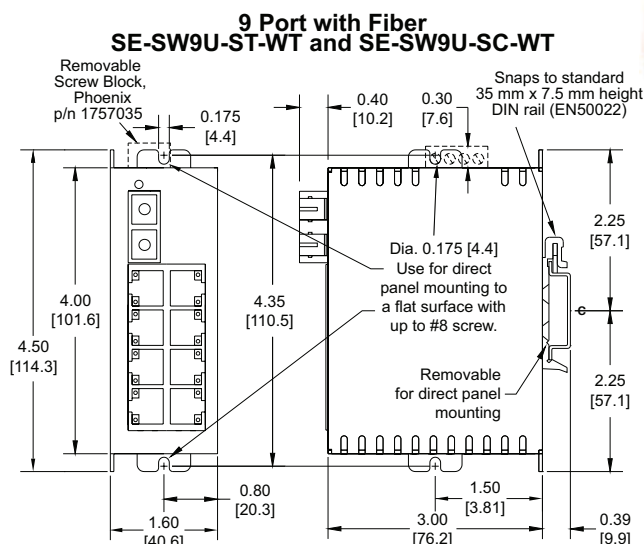
SE-SW9U-SC-WT

with one SC type fiber port



Dimensions

Inches [mm]



ACT/LNK/Speed LED

This is a bi-color (green/yellow) LED on models with one LED per RJ45 port.

ON Solid (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
Flashing	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
Green	A 100 Mbps (100BaseT) connection is detected.
Yellow	A 10 Mbps (10BaseT) connection is detected.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-SW9U-ST-WT and SE-SW9U-SC-WT 9-Port Ethernet Switches with Fiber Port.

Input power (typical with all ports active at 100 Mbps)	5.0 W
Weight	8 oz (0.23 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

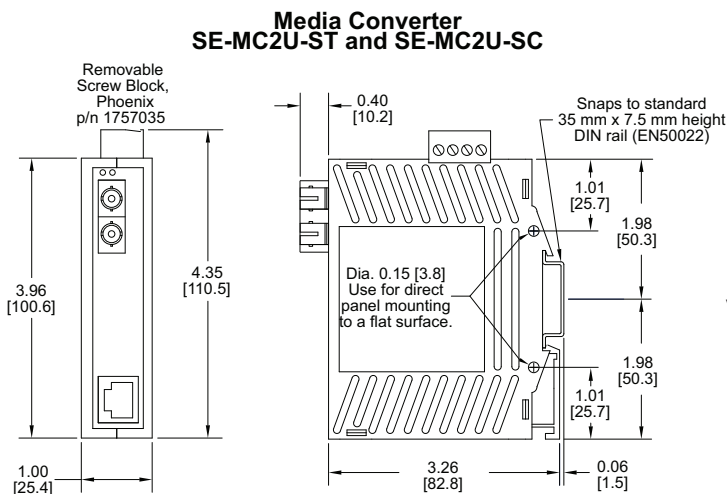
Stride Media Converter

2-Port Media Converter - Plastic Case

STRIDE SlimLine Industrial Unmanaged Ethernet Media Converter, plastic case, -10 to +60 °C operating temperature range, one 10/100BaseT auto-detecting, auto-crossover and auto-polarity RJ45 Ethernet port and one multimode 100BaseFX ST or SC fiber port. Redundant power inputs with surge and spike protection, DIN rail mounting. Supports Store and Forward wire speed switching and full-duplex with flow control. UL/CUL1604 (Class I, Div. 2, Groups A, B, C, D) and CE marked.

Dimensions

Inches [mm]



SE-MC2U-ST

with one ST type fiber port

SE-MC2U-SC

with one SC type fiber port



ACT/LNK LED

This is the **Yellow** LED on models with two LEDs per RJ45 port.

ON (yellow) (not flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, but no communications activity is detected.
ON (yellow) (flashing)	Indicates that there is a proper Ethernet connection (Link) between the port and another Ethernet device, and that there is communications activity.
OFF	Indicates that there is not a proper Ethernet connection (Link) between the port and another Ethernet device. Make sure the cable has been plugged securely into the ports at both ends.

Speed 10/100 LED

This is the **Green** LED on models with two LEDs per RJ45 port.

ON (green)	A 100 Mbps (100BaseT) connection is detected.
OFF	A 10 Mbps (10BaseT) connection is detected.

Fiber LED

This is the **Green** LED on the fiber optic models.

ON (green) (not flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, but no communications activity is detected.
ON (green) (flashing)	Indicates that there is a proper fiber connection (Link) between the port and another fiber device, and that there is communications activity.
OFF	Indicates that there is not a proper fiber connection (Link) between the port and another fiber device. Make sure the fiber optic cable has been plugged securely into the ports at both ends.

Specifications

The following are specifications relevant to the SE-MC2U-ST and SE-MC2U-SC Media Converters.

Input power (typical with all ports active at 100 Mbps)	2.0 W
Weight	4 oz (0.11 kg)
Power connector max. screw torque	5.0 lb-in (0.57 Nm)

Other Ethernet Communications Products

HA-TADP



The HA-TADP PC Ethernet adapter card is fully Plug-and-Play compatible and uses standard AMD PCNET II Family Ethernet Adapter drivers found in the Windows 98/2000/NT/XP operating systems.

Features

- Ethernet NIC for PC, PCI
- 10/100Base-T, RJ45
- PCI connection
- 100m maximum cable length
- Up to 100 Mbps data transfer rate
- Complies with IEEE 802.2 and 802.3 10Base-T standards
- Installs in 1/2 PCI slot



ECOM starter kits

H2-ECOM-START <--->

H4-ECOM-START <--->

The H2-ECOM-START and the H4-ECOM-START kits give you everything you need to make your first Ethernet to PLC connection simple to build. Each contains a PLC ECOM module and instruction manual, a network adapter card for your PC, a crossover cable, and a Showcase Demo CD.

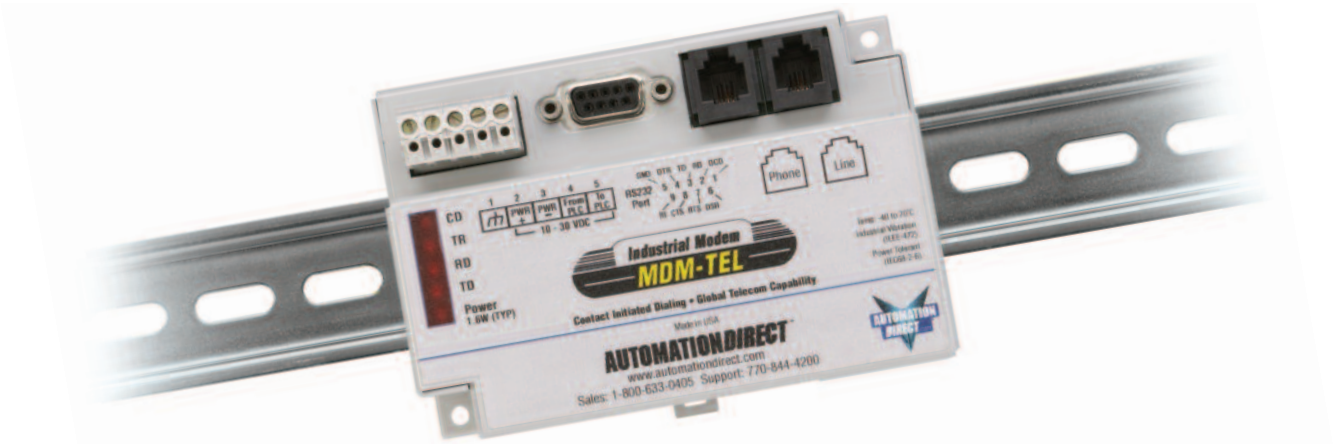


RT-CNFGKIT <--->

The Ethernet Configuration Kit includes a five-port 10/100Base-T Ethernet switch, four straight-through cables, and one crossover cable. (The cables are at least five feet in length.) The kit provides a great convenience for configuring systems, demonstration systems or basic control projects using Ethernet.



MDM-TEL Industrial Modem



Reduce design time

The MDM-TEL industrial serial modem has the features to meet your application requirements in a straight-forward manner. You won't need to concoct a way to make it work. The MDM-TEL uses an industrial version of the standard PC modem chip set, so it supports the full set of AT commands and features. The MDM-TEL complies with telephone systems around the world. Whether you have domestic or international customers, the MDM-TEL can go where your equipment goes. Required to use a specific PLC? No problem. The MDM-TEL is compatible with most brands. And with the MDM-TEL, you can avoid repeating the design and qualification process. Our modems have a five-year guaranteed availability.

Simplify installation

MDM-TEL's PC software includes an advanced Windows-based Configuration Wizard for easy set-up. The MDM-TEL comes ready for either DIN-rail or panel mounting. Requiring only 1.6W of 24 VDC power, the MDM-TEL is perfect for control panels and remote locations without the need for a 110 VAC source.

Industrial grade

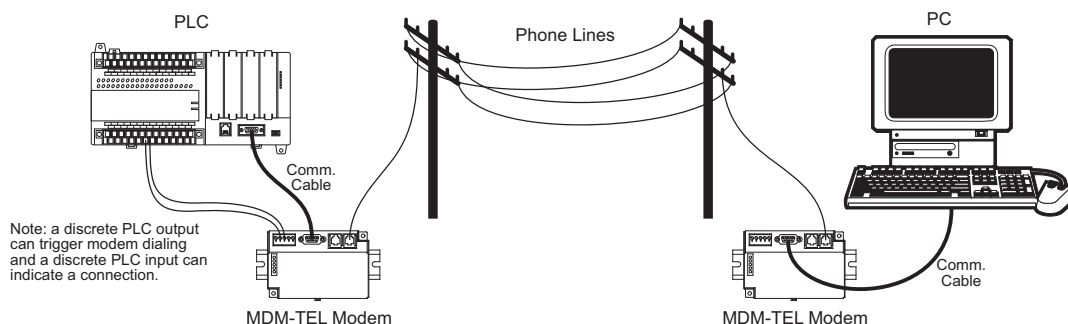
The MDM-TEL has been designed for the industrial environment. It will survive extreme temperatures, as well as dirty and unreliable industrial power. Meeting UL 1604 (Class I Div. 2) and the IEC68-2 standard for vibration resilience, the MDM-TEL will provide years of reliable performance in applications where other modems just shouldn't go.

Features:

- Contact-initiated by dialing a PLC or any other device
- Works with most PLCs (Null Modem adapter included)
- Auto answer capability
- Global Telecom capability
- DC-powered (no external transformer needed)
- Offers choice of DIN rail or panel mounting
- UL 508 (PLC enclosure), UL 1604 Class I, Div. 2, CSA, and CE-listed
- Rated -30°C to +70°C
- Includes modem setup software (Windows)
- No DIP switches or jumpers
- Includes RS-232 (DB9) modem configuration cable

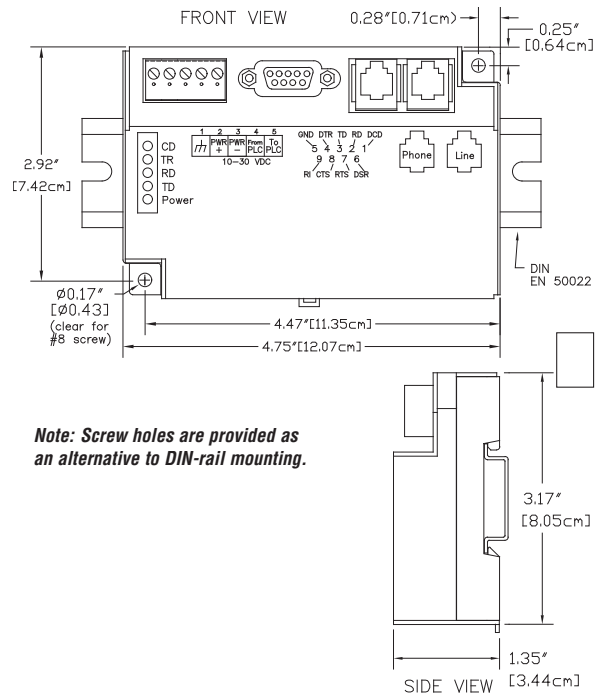
MDM-TEL <--->

PLC can actuate dial out ...



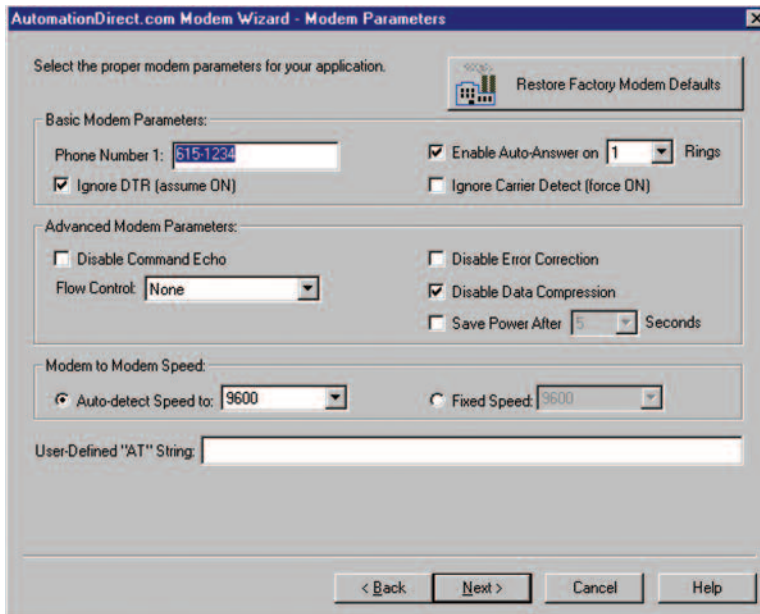
MDM-TEL Specifications

Mounting dimensions



Complete documentation

The modem wizard and user manual are provided on the MDM-TEL CD-ROM, or may be downloaded from www.automationdirect.com. An application note with help for many common situations is included.



Easy set-up with modem wizard software

MDM-TEL Performance Specifications	
Telephone Line	
Max. data rate	33.6 kbps (V.34)
Compatibility	V.34, V.32bis, V.32, V.22, V.22A/B, V.23, V.21, Bell 212A and 103
Data compression	V.42 bis MNP5
Error correction	V.42 MNP 2-4
Ringer equivalent	0.3
Line/phone jack	RJ11
RS232 Port	
Max. RS232 rate	115.2 kbps (Kilobaud)
RS232 (DB9 female)	TXD, RXD, CTS, RTS, DCD, DTR, DSR, RI, GND
Command set	All standard AT and S register commands, incl. Class 1 & 2 Fax
Status LEDs	
CD (carrier detect)	Carrier detected on the phone line
TR (terminal ready)	Host connected and ready
RD (receive data)	Data is received from the phone line
TD (transmit data)	Data being sent out the phone line
Power	On when power is present
General Characteristics	
Input power	10-30 VDC
Input current	65 mA @ 24 VDC
Operating temperature	-30 °C to 70 °C (-40 °C to 85 °C storage)
Humidity	5% to 95% RH (non-condensing)
Flammability	UL 94V-0 materials
Telecom certification	FCC part 68, Industry Canada CS03-8, CTR21 (98/482/EC); A CA TS 001-1997; ACA TS 002-1997
Electrical safety	UL 508, CSA C22. 2/14; EN61010-1 (IEC1010), IEC 950: 1991, AS/NZS3260-1993
EMI emissions	FCC part15, ICES-003, Class A; EN55022; AS/NZS3548-1995
EMC immunity	EN50082-1 (IEC801-2, 3, 4)
Surge withstand	IEEE-472 (ANSI C37.90)
Vibration	IEC68-2-6
Hazardous locations	UL 1604 (file #E200031), CSA C22.2/213-M1987, Class 1, Div 2, Groups A,B,C,D), Cenelec EN50021 (EEx nA II T4)
Mounting	DIN rail or panel mount
PLC Discrete I/O Interface	
Trigger input	Connects to PLC output. Starts auto-dialing when TRUE.
Voltage range	9 to 30 VDC (6.5 mA at 24 VDC)
Max OFF voltage	5 VDC
Online output	Output is ON as long as a connection exists (carrier detect).
Output type	Sourcing, switches power supply 100 mA max output current

MB-GATEWAY Modbus TCP/IP to RTU Gateway

MB-GATEWAY



AutomationDirect's MB-GATEWAY is a single port Modbus Gateway module that converts Modbus TCP to Modbus RTU. It supports up to 12 simultaneous Modbus TCP Client (master) Ethernet connections, and up to 128 RTU Server (slaves) serial connections. MB-GATEWAY requires 10VDC to 36VDC from an external power supply. Each module has one RJ45 10/100 Mbps Ethernet port and one RS-422/485 2 or 4-wire serial port. It supports NetEdit* or Web Browser based configuration tools.

Key features

- Automatic read function
- RJ45 10/100 Mbps Ethernet port
- RS-422/485 2 or 4 wire serial port
- Supports NetEdit* and Web browser configuration tools
- 35 mm DIN rail mount



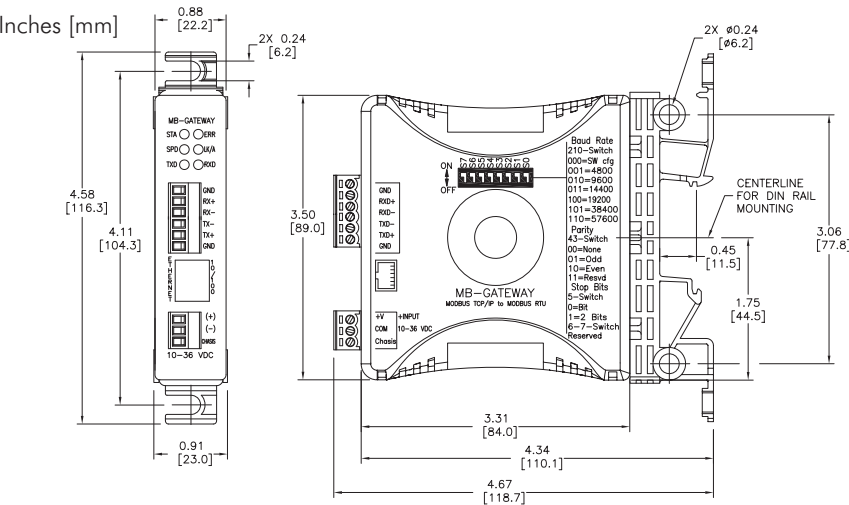
*NetEdit version 3.8 or later is required to support MB-GATEWAY.



Specifications		
Ethernet Interface	Port	RJ-45
	Speed	10/100 Mbps
	Protection	Built-in 1.5 KV magnetic isolation
	Protocol Supported	Modbus TCP/IP Server (Slave)
	Clients (Masters) Supported	12 simultaneous Modbus TCP connections
Serial Interface	Port	6-position terminal strip (Phoenix #1863194) provided
	Supported Signal Lines	RS-422 (5-wire) Signals: TX+, TX-, RX-, RX+, GND RS-485 (3-wire) Signals: Data+, Data -, GND
	Supported Baud Rates	300*, 600*, 1200*, 4800, 9600, 14.4k, 19.2k, 38.4k, 57.6k, 115.2k <i>*Cannot be set with DIP switches. Must be set via Web browser configuration.</i>
	Parity	Odd, Even, None
	Data Bits	8
	Stop Bits	1, 2
	Protocol Supported	Modbus RTU Client (Master)
	Servers (Slaves) Supported	128
	Termination	Permanently installed 120 Ω resistor between Data+ and Data -

Specifications	
Power Consumption	2W Use Class 2 power supply Use conductors rated 60/75 °C 3-position terminal strip (Phoenix #1863165) provided
Wire Range	16 - 28 AWG Solid or Stranded Conductor (1.5 mm ²)
Wire Strip Length	0.24 - 0.27 in (6 - 7 mm)
Screw Torque	1.7 lb-in (0.2 Nm)
Operating Temperature Range	0 to 60 °C (32 to 140 °F)
Storage Temperature Range	-20 to 70 °C (-4 to 158 °F)
Humidity	5 to 95% RH (non-condensing)
Environmental Air	For use in Pollution Degree 2 Environment
Vibration	MIL STD 810C 514.2
Shock	MIL STD 810C 516.2
Weight	0.2 lbs (0.09 kg)
Agency Approval	UL (file #E185989)

Dimensions



Replacement Part



Part Number	Description	Price
MB-GW-CON	MB-Gateway-Connector Kit 1 ea: Phoenix 3 pin power connector AND 1 ea: Phoenix 6 pin serial connector	<--->

FA-ISOCOCON Universal Isolated Network Adapter



FA-ISOCOCON <--->

The FA-ISOCOCON Universal Isolated Network Adapter is used to place RS-232 devices such as PLCs, operator interfaces, industrial computers, etc., on an RS-422 or RS-485 multidrop network. The Network Adapter converts RS-232 signal levels to isolated RS-422 or RS-485 signal levels. This network adapter is similar to our other RS-232/422 converters, but it offers the added benefit of network isolation. This adapter is especially useful in noisy environments where data corruption due to induced noise is possible.

The FA-ISOCOCON features Automatic Network Transmitter Enable (ANTE) so that an RTS output is not required on the connected RS-232 device. The FA-ISOCOCON is a direct functional replacement for the FA-ISONET when CTS Controlled Transmit Enable (CCTE) mode is active. Having both ANTE and CCTE modes, the FA-ISOCOCON is compatible with most RS-232 devices.

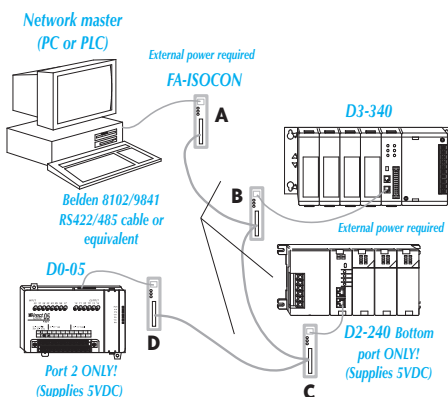
The diagram below shows a simple example of an FA-ISOCOCON used for PC to multiple PLC communications.

Key features

Following are some of the key features and benefits of the FA-ISOCOCON:

- Dipswitch selectable Automatic Network Transmitter Enable so that an RTS output is not required on the connected RS-232 device.
- Dipswitch selectable CTS Controlled Transmit Enable mode for backwards compatibility with the FA-ISONET.
- Dipswitch select termination and bias resistors; short/open TXD+/RXD+ and TXD-/RXD- terminals for 1/2 duplex comm.
- Isolation removes ground loop currents from data lines. Noise voltages resulting from transformer-like coupling are also eliminated.
- Many forms of radiated noise are reduced to negligible levels.
- FA-ISOCOCON can be powered from 24 VDC or 5 VDC. (Unit may be powered directly from CPU pins on CPUs with +5V pins or the auxiliary 24 VDC power supply on I/O bases.)
- Unit has RS-232 transmit and receive LEDs and an RS-422/485 Transmitter Enable LED to simplify troubleshooting.

RJ12 port allows you to use the modular cables (included) to quickly connect the D0-05, D2-240 or D3-340 to the FA-ISOCOCON. Connections can be made to the D3-350, DL405 CPUs and PCs with the connectors that are included.



- FA-ISOCOCON converts the network master's (computer or PLC, etc.) RS-232 communication signal levels to RS-422/485.
- FA-ISOCOCON converts the RS-422/485 signal levels back to RS-232 for a connection to the D3-340 CPU bottom port.
- FA-ISOCOCON converts the RS-422/485 signal levels back to RS-232 for a connection to the D2-240 CPU bottom port.
- FA-ISOCOCON converts the RS-422/485 signal levels back to RS-232 for a connection to the D0-05 CPU port 2.

Specifications

- Max. network distance: 4000 feet
- Max. number of devices: 32 per network
- Max. baud rate: 115.2 Kbaud
- Supply voltage: 5 VDC @ 100 mA max. (from CPU) or 24 VDC @ 70 mA (external source)
- Max. driver load: 62 ohms
- Driver voltage: $\pm 1.5V$ minimum
- No load current: 80 mA
- Max. current: 100 mA (62)
- Isolation resistance: $>10^{14} / 7pF$
- Voltage withstand: 1.2 KVrms/1s 1.0 KVrms/1 minute
- Operating temp: 0 to 60°C (32 to 140°F)

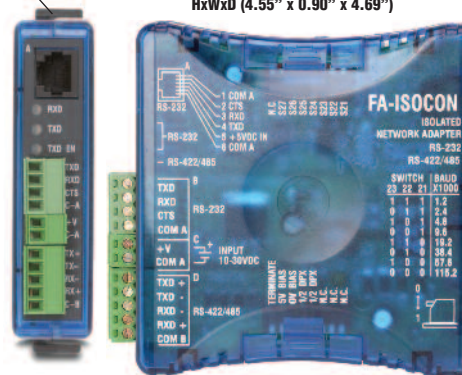
Installation is a 'snap'

The FA-ISOCOCON comes with an attached DIN rail connector. Simply hook the top of the DIN connector on the DIN rail, then pull the unit down and rotate the bottom of the DIN connector onto the DIN rail (or use the provided holes to flush-mount it on a panel). The adapter's RJ12 serial port can be connected to a PC or a DirectLogic CPU port using one of the supplied cables/connectors. Or, use the adapter's RS-232 terminal block to connect to a serial device. Connect the RS-422/485 communications wiring to the convenient RS-422/485 terminal blocks.

Adapter components

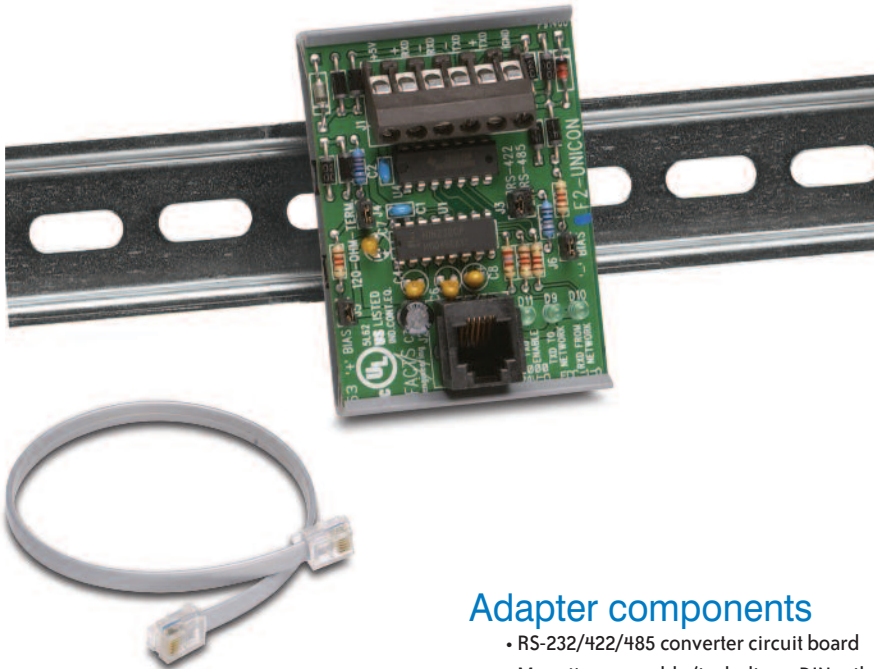
- FA-ISOCOCON Isolated Network Adapter with attached DIN mounting bracket
- 25-pin male to RJ12 6P6C connector
- 9-pin female to RJ12 6P6C connector
- 1' cable with RJ12 6P6C plug to RJ11 4P4C plug for use with D3-340.
- 1' cable with RJ12 6P6C plug to RJ12 6P6C plug

Dimensions including DIN bracket and terminal blk.
HxWxD (4.55" x 0.90" x 4.69")



Removable terminal blocks make it easy to connect communication wiring. (Replacement terminal plug kit FA-ISOCOCON-P)

F2-UNICON Universal Converter



General specifications

- Max. network distance: 4000 feet
- Max. baud rate: 19.2 Kbaud
- Supply voltage: 5 VDC (from CPU)
- Max. driver load: 62
- Driver voltage: $\pm 1.5V$ minimum
- No load current: 65 mA
- Max. current: 100 mA
- Operating temp: 60°C (140°F)

Example of system using F2-UNICON

- F2-UNICON converts the network master's (computer) RS-232 communications card signal levels to RS-422/485, which is suitable for a multi-drop network.
- F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the D2-240 CPU bottom port.
- F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the D2-240 CPU bottom port.
- F2-UNICON converts the RS-422/485 signal levels back to RS-232 for a connection to the DL05 port 2

Adapter components

- RS-232/422/485 converter circuit board
- Mounting assembly (including a DIN rail bracket) for the circuit board
- 1 ft. modular cable with two RJ12 6P6C plugs

F2-UNICON

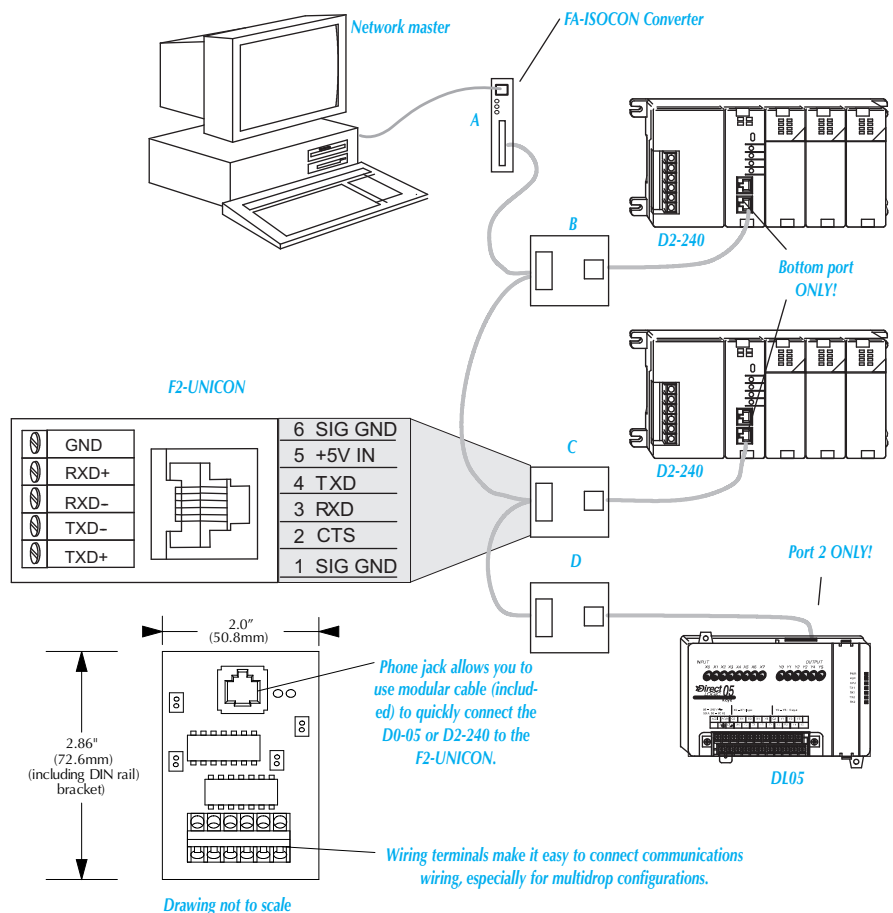


The F2-UNICON Universal Converter converts RS-232 signal levels to RS-422 signal levels or RS-422 signal levels into RS-232 signals. The F2-UNICON does not offer the benefit of network isolation that the FA-ISOCAN offers. The F2-UNICON has been specifically designed to be used with the DL05 and D2-240 CPUs. It offers features such as:

- Easily mounts to DIN rail
- Does not require an external power source. It obtains power from the +5V pin on the D2-240 CPU port (bottom port) and the DL05 (port 2).
- Has transmit and receive LEDs to simplify troubleshooting.

Installation is a "snap"

The F2-UNICON comes with a DIN rail housing for the circuit board. Simply snap the board into the housing and mount it on a DIN rail (or flush-mount it on a panel). Connect the communications wiring to the convenient terminal blocks, then connect the adapter to the CPU port with the cable.



FA-CABKIT Universal Cable Kit

FA-CABKIT <--->

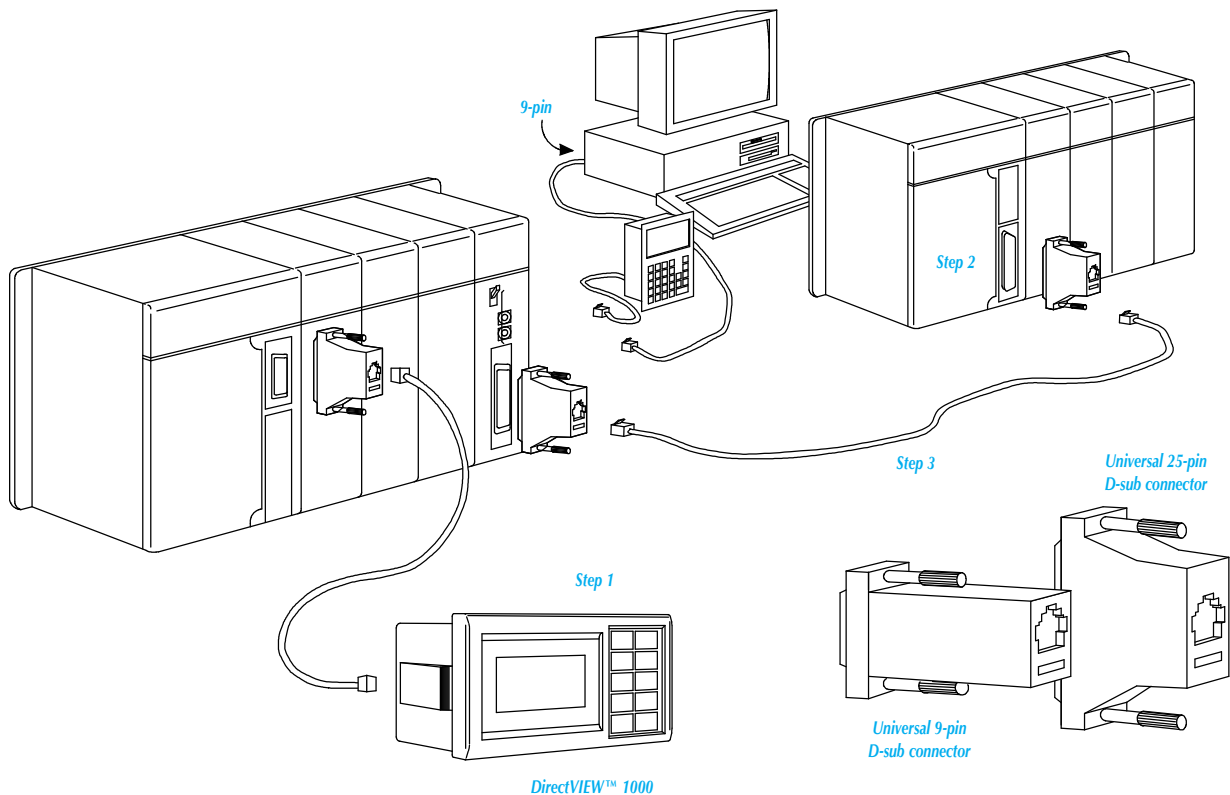
The Universal Cable Kit (FA-CABKIT) allows you to connect various types of **DirectLOGIC™** products with an RS-232 cable in a matter of minutes. The kit consists of two phone cables (with male plugs already attached) and several specially wired connectors. The special connectors are a D-sub style with built-in female phone jacks. This kit, with its wide variety of special connectors, allows for easy connections to many different products from each of the **DirectLOGIC** product families. The individual pieces of the kit are not sold separately except for the FA-15HD high density 15-pin connector.

Note: For D-sub to terminal block adapters, see the Connection Systems section

Follow these simple steps to use the cable kit:

1. Plug the proper universal connector (or cable) into the appropriate communication port of the host product (CPU, DCM, CoProcessor module, personal computer, operator interface, etc.).
2. Plug the proper universal connector onto the other device to be connected to the host system : (DL05, DL06, DL105, DL205, DL305, DL405, CoProcessor module, PC communication card, etc.).
3. Connect the universal cable between the two connectors.
4. Verify that the circuit you created is correct before applying power.

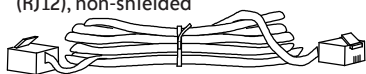
WARNING: This cable system is designed for temporary testing situations and should not be used in actual applications. This cable is not shielded and is susceptible to electrical noise. Electrical noise can cause unpredictable operation that may result in a risk of personal injury or damage to equipment.



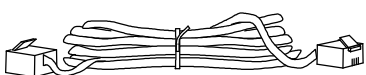
FA-CABKIT Universal Cable Kit

The table lists various devices that can be connected quickly with the universal cable kit. To determine which parts you need to use, simply use the table to find the connection you wish to make. Then match each device required for that connection with its part number. Snap the pieces together and you're ready to communicate. The following seven parts are included in the Universal Cable Kit. These parts are not sold separately, except for the FA-15HD high density 15-pin connector.

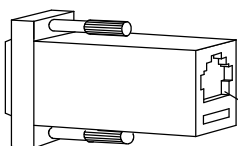
1. Standard phone-style connectors (RJ12), non-shielded



2. Standard phone and handset style connectors (RJ12, RJ11), non-shielded

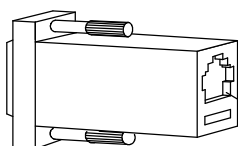


3. Universal 9-pin female D-sub connector



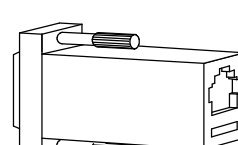
Standard RJ12
phone jack

4. Universal 9-pin male D-sub connector



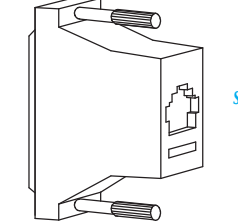
Standard RJ12
phone jack

5. Universal 15-pin male D-sub connector



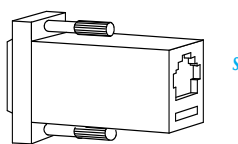
Standard RJ12
phone jack

6. Universal 25-pin male D-sub connector



Standard RJ12
phone jack

7. Universal 15-pin HD male D-sub connector (FA-15HD)



Standard RJ12
phone jack

Universal cable kit

Items included in the universal cable kit

Device Description

1. 7 ft. standard cable, 6P6C to 6P6C phone type
2. 6 ft. adapter cable, 6P6C to 4P4C phone type
3. AT connector 9-pin female to 6P6C connector
4. (ASCII BASIC module) 9-pin male connector to 6P6C connector
5. DL405 15-pin male connector to 6P6C connector
6. DL405 CPU and DCM 25-pin male connector to 6P6C connector
7. DL06, D2-250(-1) and D2-260 CPUs 15-pin HD male connector to 6P6C connector

Common connection examples

DL05, DL06, DL105, DL205, D3-350 and (D4-450 port2) CPU connections

Connection desired	Devices required
1. DL05/06/105/205/DL350/D4-450 to AT type computer 9-pin	1,3
2. CPU to DV-1000	1
3. CPU to DL205 or DL405 DCM	1,6
4. CPU to DL340 CPU	2
5. CPU to ABM (DL205 only)	1,4

DL06, D2-250(-1), D2-260 CPU port 2 connections

Connection desired	Devices required
1. DL06/250(-1)/260 port 2 to AT type computer 9-pin	1,3,7
2. DL06/250(-1)/260 port 2 to DV-1000	1,3,7

DL305 D3-232-DCU connections

Connection desired	Devices required
1. DCU to AT type computer 9-pin	1,6,3
2. DCU to DL405 series DCM (requires 2 kits)	1,6,6
3. DCU to DL340 CPU	2,6
4. DCU to ABM	1,6,4

DL305 CPU connections

Connection desired	Devices required
1. DL340 CPU to AT type computer 9-pin	2,3
2. DL340 CPU to DL405 series CPU/DCM	2,6
3. DL340 CPU to DL240 CPU	2
4. DL340 to ABM	2,4
5. DL340 CPU to DCU CPU	2,6

DL405 CPU (15-pin) top port connections

Connection desired	Devices required
1. DL405 CPU to AT type computer 9-pin	1,5,3
2. DL405 CPU to DV-1000	1,5

DL405 CPU (25-pin) bottom port connections

Connection desired	Devices required
1. DL405 CPU to AT type computer 9-pin	1,6,3
2. DL405 CPU to DL405 series DCM (requires 2 kits)	1,6,6
3. DL405 CPU to DL340 CPU	2,6
4. DL405 CPU to ABM	1,6,4

USB Programming Cables

USB Cables

AutomationDirect's high quality USB cables are used to connect USB devices to a USB port on a PC. Each cable has Standard-A plug to Standard-B plug end connectors and meet the USB 2.0 requirements. These cables can be used for **Programming** Productivity Series CPU's, **C-more** panels, **C-more** Micro-Graphic TFT panels (EA1-T4CL, EA1-T6CL), and PC to touchscreen connections for Atlas Industrial Monitors that include touchscreen capability.



Part Number	Description	Price
USB-CBL-AB3	3-ft (0.9 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	<--->
USB-CBL-AB6	6-ft (1.8 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	<--->
USB-CBL-AB10	10-ft (3 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	<--->
USB-CBL-AB15	15-ft (4.6 meter) Standard USB 2.0 cable with Standard-A plug to Standard-B plug. Suitable for all USB devices.	<--->



- Productivity Series CPU's
- **C-more** panels
- **C-more** Micro-Graphic TFT panels (EA1-T4CL, EA1-T6CL)
- Atlas Industrial Monitors with touchscreen capability.

USB to RS-232 Converter

USB-RS232



This quality USB to RS-232 converter transparently connects serial devices to PC applications via a USB port. It is perfect for the user needing to connect to a serial port-based peripheral from a laptop PC with an available USB port but no serial port. The adapter driver creates a virtual serial port (using the next available COM number). Applications connect to the virtual COM port as if it were a standard serial port. The USB-serial conversion is completely transparent to the peripheral device.



Features:

- Flexible cable
- Premium quality
- Gold connectors
- Ergonomic molding for easy connection
- Industry standard color coded for easy installation
- Foil and braid shielding to reduce EMI/RFI interference
- Designed for high-speed transmissions
- LED power and TX/RX indicators
- Mates with PC DB9 serial cables (such as our D2-DSCBL PLC cable)
- 2 hex nuts included

Specifications:

- RS-232 standard
- Powered by the USB bus
- DB 9 male connector
- USB A male connector
- 6ft (1.8) cable
- USB 1.1 compliant
- Plug and Play

Operating Systems:

- Windows 98® and Windows 98 SE®
- Windows Millennium®
- Windows 2000 Professional®
- Windows 2000 Server® Family
- Windows XP Home®
- Windows XP Professional®
- Windows Vista®
- Windows 7®

Note: If needed, drivers can be downloaded at <http://support.automationdirect.com/downloads.html#tools> (choose USB-RS232 adaptor driver)

Compatible with AUTOMATIONDIRECT's:

- **Direct**LOGIC PLCs (**Direct**SOFT 3.0C build 80 and later versions)
- Optimate panels (OP-WINEDIT software)
- MDM-TEL industrial modem (Modem Wizard software)
- Lookout**Direct** software

Hardware Requirements:

- Pentium II class processor or higher
- One available USB port



Device

USB to RS-485 PC Adapter

USB to RS-485 PC Adapter

Convenient 2-wire USB to RS-485 serial communication adapter for universal RS-485 use (GS drives, SureServo servos, Solo temperature controllers, CLICK PLCs, etc.). Does not require an external power supply or complicated configuration process.

Features:

- Type A (plug) USB connector
- Universal female RJ45/RJ12 modular connector (accepts RJ12 & RJ45 plugs)
- Supports multiple baud rates
- USB v2.0 compliant
- RoHS compliant
- CE compliant

Components Included:

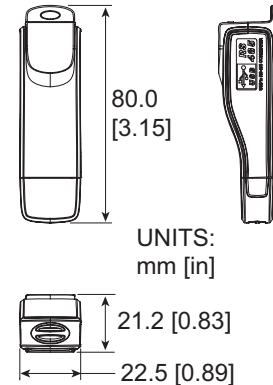
- Adapter
- Cable – 6-wire RJ12 crossover; 2m [79 in] (for plug & play connectivity to GS drives)
- Cable – 2-wire RJ12–flying leads; 2m [79 in] (for universal RS-485 connectivity to SureServo, Solo, etc.)
- Mini CD with Windows driver and installation instructions

USB to RS-485 PC Adapter			
Part Number	Price Each	Description	Component Compatibility *
USB-485M	<--->	USB TO RS-485 PC Adapter; includes (2) RJ12 cables, mini-CD with driver, instructions	GS series AC drives – GSOFt configuration software GS series AC drives – Modbus polling SureServo servo drives – SV-PRO configuration software SureServo servo drives – Modbus polling SOLO process controllers – SL-SOFT configuration software SOLO process controllers – Modbus polling CLICK PLCs – Modbus polling P3-550 PLCs – Modbus polling
Specifications			
Power Supply		no external power supply needed	
Power Consumption		0.4W	
Voltage Isolation		3000 VDC	
Baud Rates Supported		75, 150, 300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 (bps)	
Transmission Type		RS-485 half-duplex (2-wire)	
LED Display		Steady Green LED ON: power is ON. Blinking orange LED: data is transmitting.	
USB Connector		Type A (plug)	
RS-485 Connector		RJ45	
Compatibility		USB v2.0 specification	
PC Compatibility		Windows Operating System required for bridge & driver installation: Windows 7 - 32 bit; Windows 7 - 64 bit; Windows Vista - 32 bit; Windows Vista - 64 bit; Windows XP	
* NOT compatible with DirectSOFT PLC software. (DirectSOFT RS-485 programming requires 4-wire full-duplex data transmission.)			

USB-485M



USB-485M Dimensions



USB-485M RJ-45 Pin-out



8 ← 1



RJ-45

Pin	Description
1	reserved
2	reserved
3	reserved
4	SG+
5	SG-
6	reserved
7	reserved
8	reserved

Ethernet Patch Cables

Cat5e STP Ethernet Patch Cables

Connectivity

Ethernet is a multi-purpose communication protocol that has become the data standard for the industrial market. AutomationDirect offers several PLC's, HMI's and drives that support the Ethernet Protocols for data distribution, software programming and configuration.

Designed for Industrial Use

The noise interference radiated from electrical components that is often associated with factory floor environments can result in partial or complete data loss. This may result in delays or complete communication loss in extremely noisy environments.

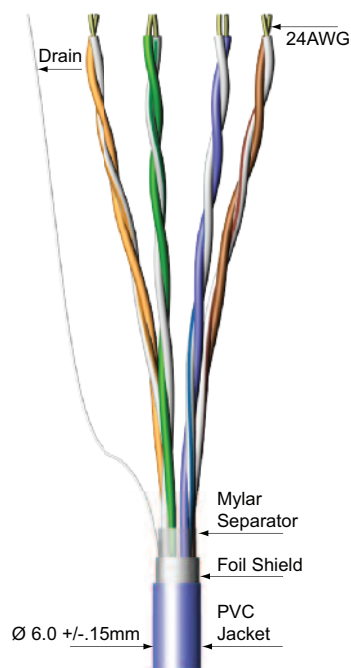
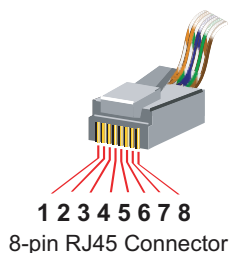
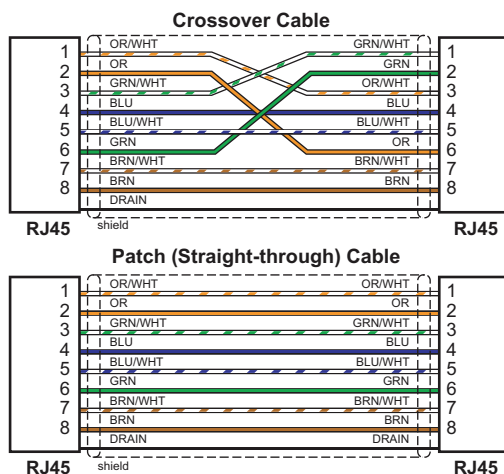
Our Ethernet patch cables are designed to reduce the effects of (EMI) electromagnetic interference by incorporating a single metal foil shield that wraps around the entire set of 8 wires in the Cat5e cable. The RJ45 connectors are also shielded against electrical interference and designed to be robust. Our 350 MHz cables exceed all Cat5e TIA/EIA standards, and drastically reduce both impedance and structural return loss (SRL) when compared to standard 100 MHz cables.

With several colors and lengths to choose from at great pricing, these cables should help you in creating solid, reliable Ethernet networks with any application.



Features

- Connector; 50-micron gold plated RJ45 male plugs
- Conductor; 4-pair 24 AWG stranded copper
- Overall foil shielded cable for industrial applications
- Crossover cables have "crossover" label on each end.
- Exceeds Category 5e specifications, 350MHz
- Multiple lengths and colors
- CM rated, suitable for general use other than plenum spaces
- RoHS compliant



Ethernet Patch Cables

Straight Through Patch Cables				
Part Number	Color	Description	Length	Price
C5E-STPGY-S3	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 3 ft. (0.9m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	3' (0.91 m)	<--->
C5E-STPBK-S3	Black			<--->
C5E-STPBL-S3	Blue			<--->
C5E-STPGN-S3	Green			<--->
C5E-STPPL-S3	Purple			<--->
C5E-STPRD-S3	Red			<--->
C5E-STPYL-S3	Yellow			<--->
C5E-STPOR-S3	Orange			<--->
C5E-STPGY-S7	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 7 ft. (2.1m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	7' (2.13 m)	<--->
C5E-STPBK-S7	Black			<--->
C5E-STPBL-S7	Blue			<--->
C5E-STPGN-S7	Green			<--->
C5E-STPPL-S7	Purple			<--->
C5E-STPRD-S7	Red			<--->
C5E-STPYL-S7	Yellow			<--->
C5E-STPOR-S7	Orange			<--->
C5E-STPGY-S10	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 10 ft. (3.0m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	10' (3.05 m)	<--->
C5E-STPBK-S10	Black			<--->
C5E-STPBL-S10	Blue			<--->
C5E-STPGN-S10	Green			<--->
C5E-STPPL-S10	Purple			<--->
C5E-STPRD-S10	Red			<--->
C5E-STPYL-S10	Yellow			<--->
C5E-STPOR-S10	Orange			<--->
C5E-STPGY-S14	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 14 ft. (4.3m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	14' (4.3 m)	<--->
C5E-STPBK-S14	Black			<--->
C5E-STPBL-S14	Blue			<--->
C5E-STPGN-S14	Green			<--->
C5E-STPPL-S14	Purple			<--->
C5E-STPRD-S14	Red			<--->
C5E-STPYL-S14	Yellow			<--->
C5E-STPOR-S14	Orange			<--->
C5E-STPGY-S25	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 25 ft. (7.5m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	25' (7.6 m)	<--->
C5E-STPBK-S25	Black			<--->
C5E-STPBL-S25	Blue			<--->
C5E-STPGN-S25	Green			<--->
C5E-STPPL-S25	Purple			<--->
C5E-STPRD-S25	Red			<--->
C5E-STPYL-S25	Yellow			<--->
C5E-STPOR-S25	Orange			<--->
C5E-STPGY-S50	Gray	Ethernet patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 50 ft. (15.2m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	50' (15.2 m)	<--->
C5E-STPBK-S50	Black			<--->
C5E-STPBL-S50	Blue			<--->
C5E-STPGN-S50	Green			<--->
C5E-STPPL-S50	Purple			<--->
C5E-STPRD-S50	Red			<--->
C5E-STPYL-S50	Yellow			<--->
C5E-STPOR-S50	Orange			<--->

Ethernet Patch Cables

Crossover Patch Cables				
Part Number	Color	Description	Length	Price
C5E-STPYL-C3	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 3 ft. (0.9m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	3' (0.91 m)	<--->
C5E-STPOR-C3	Orange			<--->
C5E-STPYL-C7	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 7ft (2.1m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	7' (2.13 m)	<--->
C5E-STPOR-C7	Orange			<--->
C5E-STPYL-C10	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 10ft (3.0m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	10' (3.05 m)	<--->
C5E-STPOR-C10	Orange			<--->
C5E-STPYL-C14	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 14ft (4.3m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	14' (4.3 m)	<--->
C5E-STPOR-C14	Orange			<--->
C5E-STPYL-C25	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 25ft (7.5m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	25' (7.6 m)	<--->
C5E-STPOR-C25	Orange			<--->
C5E-STPYL-C50	Yellow	Ethernet crossover patch cable, Cat5e STP (Twisted Pairs with overall foil Shield), 50ft (15.2m) length, PVC cable jacket. RJ-45 male connectors, 350 MHz, 4-pair 24 AWG stranded copper; labeled as "Crossover" on both ends. Can support 10 / 100 / 1000 Mbps; exceeds Category 5e cable specifications.	50' (15.2 m)	<--->
C5E-STPOR-C50	Orange			<--->

